

GLAMORGAN COUNTY COUNCIL.

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# Annual Report

OF THE

COUNTY MEDICAL OFFICER,

W. WILLIAMS, M.A., M.D., D.PH. (Oxon.),

FOR THE YEAR 1894.

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CARDIFF:

DANIEL OWEN AND COMPANY, LIMITED, ST. MARY STREET.

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BRITISH MEDICAL JOURNAL



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# Glamorgan County Council.

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*To the Chairman and Members of the Sanitary Committee.*

GENTLEMEN,

I have the honour of submitting to you my Third Annual Report on the Health and Sanitary condition of the County of Glamorgan for the year 1894.

It is compiled on the same general plan as those for previous years. The first part deals with the County as a whole, and contains numerous references to questions that are of more than local importance, while in the second part I have summarised the Reports of the Local Medical Officers of Health. The Local Summaries are frequently supplemented by remarks of my own, which are, in every instance, the outcome of personal observation, and I have endeavoured to supply all important omissions.

The Sanitary areas remained the same as in 1893, but there have been several changes among the Health Officers—Drs. Shepherd, Davies, and Mitchell, were appointed for Cowbridge, Maesteg, and Llandilo-Talybont, respectively, in place of Drs. Meller, Thomas, and Griffiths, who resigned.

Through the operation of the Local Government Act, 1894, important changes in the re-adjustment of boundaries, &c., have taken place, and, at present, it is *only* in the case of the Neath Rural District (which includes the parish of Ystradfellte in Breconshire) that the County boundary is over-lapped.

The locality of Gilfach-Goch in the watershed of the Ogwr, is still included in three sanitary districts, and here some re-adjustment is desirable.

Annual Reports have been received from all the districts, and kept coming in from the end of January till the end of June. This unnecessary delay has again caused much inconvenience and accounts for the late appearance of this Report. I can see no reason why every Annual Report should not be printed and circulated by the end of March in the following year, and I am of opinion that the Council should insist upon having them by this date.

Of the 32 Reports, 22 as compared with 11 in 1893, are printed. This is a great improvement, but it is to be hoped that in future each District Council will print the Report of their Medical Officer. All the Rural Reports were printed, but the following Urban Authorities were in default in this respect, viz.:—Cowbridge, Neath, Aberdare, Bridgend, Caerphilly, Glyneoriwg, Maesteg, Mountain Ash, Oystermouth, and Porthcawl. Many of the Reports are full of useful information and valuable suggestions, while a few contain little or nothing of importance, and are most carelessly arranged; a few also are unaccompanied by Table C, and particulars of the work done by the Inspector are omitted. There is increased evidence, however, of more care having been taken in their preparation generally, but a greater uniformity in the plan of their preparation is still desirable. Of the 22 printed Reports, *twelve* were demy 8vo.; *four*, demy 4to; *four*, fool's cap folio; *one*, post folio; and *one*, crown 4to.

With respect to the preparation of Annual Reports, I would suggest for the consideration of the Medical Officers of Health, that—

- (1) All Reports be printed in demy 8vo.
- (2) All reports be prepared after the plan which is made use of in the local summaries, the details of which are apparent on reference to any of them.



I would also call special attention to several matters that are still indifferently attended to by local authorities; they are different in different districts, but the most important seem to me to be:—

- (1) The more strict enforcement of Building Bye-laws. It is most desirable that no new houses be inhabited without previously having been certified by an officer of the Authority, to be, in his opinion, in every respect, fit for human habitation.
- (2) More attention to the ventilation of drains and sewers, and the efficient trapping of drains.
- (3) The importance of making a systematic house-to-house inspection of each district at certain intervals.
- (4) The prevention of the pollution of rivers. The prevention of rivers' pollution, with its attendant evils to the inhabitants dwelling on their banks, and to cattle (especially milch cows), which are dependent on polluted water for drinking supply, is a question of the utmost importance.
- (5) The Notification of Infectious Disease should be compulsory in every district. Here I would also call attention to a very praiseworthy practice, which is in operation in several districts, viz.:—It is highly desirable in all cases of infectious sickness that each Authority should order their Inspectors or Inspector, to immediately notify the head of the school at which any child or children from an infected house may attend, and that from this date, no child from the infected house be allowed to attend school until a certificate is given by the Medical Officer of Health, that danger is over.

Although much good work has been accomplished by the Sanitary Committee I feel that several matters are still in need of more attention. The powers conferred upon County Councils by the Rivers' Pollution Prevention Acts, and the "Housing of the Working Classes Act, 1890," (sec. 45), to deal with dwellings unfit for human habitation, should be more rigidly put in force. Now there is no obstacle in the way of preventing the pollution of rivers by *sewage*, for the Rivers Pollution Amendment Act, 1893, enacts that:—"Where any sewage matter falls or flows, or is carried into any stream after passing through, or along, a channel which is vested in a Sanitary Authority, the Sanitary Authority shall, for the purposes of section 3 of the Rivers Pollution Prevention Act, 1876, be deemed to knowingly permit the sewage so to fall, flow, or be carried."

On undertaking the duties of County Medical Officer of Health some two-and-a-half years ago, I felt that my first and most important duty was to make myself familiar with the needs and requirements of each separate district, and then represent matters in their true light to the Authorities concerned. In order to gain this end I was actuated to make a systematic survey of the County, the outcome of which is embodied in a small volume entitled "A Sanitary Survey of Glamorganshire," and is circulated herewith. This Survey was completed towards mid-year, 1894, and had occupied the greater part of my time since my appointment. Without such a record of things as they existed, which was compiled after detailed enquiry by myself, your Committee could not have estimated, as they will now be able to, the activity displayed by the several Authorities in the discharge of their administrative duties. The District Reports have in all instances been sent to, and considered by, the Authorities concerned, and my second systematic inspection of the whole County, which is now all but completed, has shewn to me clearly that your efforts have not been in vain, for already a perceptible improvement in the sanitary condition of many districts, is evident, and there are unmistakable signs of increased activity on the part of Local Authorities and the general public in matters sanitary. Details of the effected improvements have been placed before you. These, with a number of special Reports, together with particulars of my visits of enquiries to various parts of the County on questions of, epidemic disease, water supply, the housing of the working classes, sewerage and drainage, the adulteration of articles of food and drink, the Administration of the Public Health Acts, &c., have already been placed before you in my various quarterly and other Reports.

The County summary showing the prevalence of infectious sickness in all the districts, has been issued on each Monday morning through the year, and a copy sent to each local Health Officer. With regard to the Weekly Cards, I would again request those Health Officers, who have not already done so, to be good enough, in the future, to return the cards weekly and regularly.

A few months ago, a Report from a Committee appointed by the Senate of the University College of South Wales and Monmouthshire, was placed before you, but as I have expressed my views on this subject to the Sanitary and Technical Instruction Committees, it is unnecessary to do so here. It would, perhaps, be useful to include the remarks contained in the local Reports, which have reference to such a Department. Dr. Pritchard, in dealing with diphtheria, writes "During the past year a great advance has been made in the treatment of this very fatal disease. . . . The Glamorgan County Council will, doubtless, in the near future, establish a Laboratory to which specimens of the membrane that affects the throat of stricken patients, could be sent and examined for the characteristic bacillus of this disease. If these were present in however mild a case, the proper treatment could be resorted to at once, and every precaution taken."

Dr. Davies, Llantrisant, in dealing with diphtheria writes, "The Worcester County Council, among other public bodies, has made arrangements for the examination, by skilled bacteriologists, of specimens of membrane, or scrapings taken from the throats of patients suspected to be suffering from the disease, and for the supply of anti-toxin to Medical men in the County who wish to test its efficacy . . . and I hope the example set by the Worcestershire County Council will be followed by our own Council."

The clerical work arising in connection with the correspondence and the other duties of my office is increasing, and without any clerical assistance, an office, and a laboratory, I am somewhat handicapped, but since these matters are now under consideration, I will only state that it would be most advantageous for me to have the office and laboratory in the same building. Up to the present, the greater part of my time has been devoted to out-door work, and now that I am thoroughly familiar with the needs and requirements of each district, I could afford more time to laboratory work.

I remain, Gentlemen,

Your obedient Servant,

**WILLIAM WILLIAMS.**

*19th August, 1895.*



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## PART I.

## THE COUNTY.

## AREA AND POPULATION

The Administrative County of Glamorgan, together with the County Boroughs of Cardiff and Swansea, have an area of 516,966 statute acres. Deducting from this the 11,151 acres included in the County Boroughs, there remains 505,815 acres as representing the area of the Administrative County. Within this area there are included 19 urban, and 10 rural, districts. According to the census, 1891, the total population of the whole county was 687,218, that of the Administrative county being 467,954, consisting of 249,567 males, and 218,387 females, occupying 84,264 houses.

## ADMINISTRATIVE COUNTY (AND COUNTY BOROUGHS).

## AREA—HOUSES—POPULATION.

	Area in Statute Acres.	Houses.			Population.		
		Inhabited.	Unin- habited.	Building.	Persons.	Males.	Females.
Administrative County and County Boroughs. . .	516,966	121,045	4,588	1,727	687,218	360,250	326,968
County Borough of Cardiff . .	6,064	20,476	1,086	332	128,915	65,745	63,170
County Borough of Swansea	5,087	16,305	595	171	90,349	44,938	45,411
Administrative County . .	505,815	84,264	2,907	1,224	467,954	249,567	218,387

The following figures shew the population of the ancient county at each successive census since 1801 :—

Total	population	in	1801	was	70,879
..	..	..	1811	..	85,069
..	..	..	1821	..	120,073
..	..	..	1831	..	126,612
..	..	..	1841	..	171,188
..	..	..	1851	..	231,849
..	..	..	1861	..	317,752
..	..	..	1871	..	397,859
..	..	..	1881	..	511,433
..	..	..	1891	..	687,218

The estimated population at mid-year, 1894 (as given in the reports of the Medical Officers of Health) is 541,296, being an increase on the census (1891) population of 73,342, and on the estimated population of 1893 of 19,424. The population of the urban districts is given as 395,645 and that of the rural districts as 145,657, thus :—

POPULATION IN 1891, 1893 AND 1894.

DISTRICTS.	Census, 1891.	Estimated, 1893.	Estimated, 1894.	Increase on 1893.	Decrease.
Urban .. .. .	467,954	378,121	395,645	17,524	—
Rural .. .. .		143,757	145,651	1,900	—
Administrative County ..	467,954	521,872	541,296	19,424	—

The only district in which a decrease of the population (1,304) is reported, as compared with the previous year, is Bridgend Rural. This is accounted for by the diminution in the population of the Western district. The population of the boroughs of Cowbridge and Neath; the urban districts of Briton Ferry, Caerphilly, Margam, Mountain Ash, and Porthcawl; the rural district of Gower and Neath, and the parishes of Llanfedw and Rhydywern remain stationery. In the remaining districts there has been an increase, the greatest being reported from Pontypridd (5,378), where the area has been extended, Ystradyfodwg (5,086), Barry (2,568), and Glyn-corrwg (1,000). It appears that different methods are adopted by the various Medical Officers of Health in estimating the population of their districts; some few do not appear to have followed any recognised methods, while others arrive at the number from their acquaintance and knowledge of the industries of the district, others assign a certain number to each occupied house, this number being the number occupying each house at the date of the last census, and I consider this method to approach nearer the truth than any other. In no instance is the estimation made on the rate of increase during the preceding intercensal period, and I doubt whether such a method is applicable to any of the districts in this county, inasmuch as the coal, tin-plate, iron and steel industries fluctuate so much within short periods of time.

The estimated population and density of population in the sanitary districts are given in the following table :—

URBAN.						Area in Acres.	Population.	Persons to an Acre.
Aberavon	..	..	..	..	..	2,060	6,850	3·3
Cowbridge	..	..	..	..	..	84	1,250	14·8
Neath	..	..	..	..	..	1,427	11,500	8·05
Aberdare	..	..	..	..	..	15,127	42,349	2·7
Barry and Cadoxton	..	..	..	..	..	3,323	19,263	5·9
Bridgend	..	..	..	..	..	629	5,426	8·2
Briton Ferry	..	..	..	..	..	1,381	6,000	4·3
Caerphilly	..	..	..	..	..	17,000	14,000	0·82
Garw and Ogmore	..	..	..	..	..	17,936	15,600	0·8
Glyncorrwg	..	..	..	..	..	10,220	5,000	0·4
Maesteg	..	..	..	..	..	6,709	10,000	1·4
Margam	..	..	..	..	..	18,347	7,000	0·38
Merthyr	..	..	..	..	..	17,714	65,579	3·7
Mountain Ash	..	..	..	..	..	10,554	20,976	1·9
Oystermouth	..	..	..	..	..	2,615	4,060	1·5
Penarth	..	..	..	..	..	2,507	13,500	5·4
Pontypridd	..	..	..	..	..	8,000	36,572	4·4
Porthcawl	..	..	..	..	..	3,365	1,800	0·5
Ystradyfodwg	..	..	..	..	..	23,543	109,820	4·7
Totals	..	..	..	..	..	162,537	395,645	2·4

Average number of persons to an acre in Urban districts is 2·4.

„ „ „ acres „ a person „ „ „ „ 0·41.

RURAL.					Area in Acres.	Population.	Persons to an Acre.
Bridgend and Cowbridge—							
Bridgend Division	..	..	..	..	40,023	14,661	0·36
Cowbridge Division	..	..	..	..	39,785	6,150	0·15
Cardiff	..	..	..	..	68,435	18,709	0·26
Gower	..	..	..	..	57,006	7,428	0·13
Merthyr	..	..	..	..	22,354	15,360	0·67
Neath	..	..	..	..	33,509	23,953	0·71
Pontardawe—East Division	..	..	..	..	10,352	8,270	0·79
„ West Division	..	..	..	..	17,971	10,483	0·57
Llantrisant and Llantwit Fardre	..	..	..	..	17,358	9,509	0·53
Swansea—Llangyfelach Division	..	..	..	..	10,001	11,266	1·1
„ Llandilo Talybont Division	..	..	..	..	17,246	14,970	0·86
Llanelly—Borough and Parish of Loughor	..	..	..	..	3,648	4,342	1·19
Newport—Parishes of Llanfedw and Rhydywern	..	..	..	..	3,225	550	0·17
Totals	..	..	..	..	340,913	145,651	0·42

Average number of persons to an acre in rural districts is 0·42.

„ „ „ acres to a person „ „ 2·34.

or in other words the

Average number of persons to an acre in the Administrative County is 1·41.

„ „ „ acres „ a person „ „ „ 1·37.

The perusal of the foregoing tables shows that a great difference exists in the density of the population in the various districts, thus in Cowbridge Borough there were 14 persons to an acre; in Neath Borough 8; in Barry 5·9; Penarth 5·4; whilst in the urban districts of Porthcawl, Glyncoirwrg, Garw, and Ogmere, there were 0·5, 0·4 and 0·8 persons to each acre respectively. In only two of the rural districts does the number of persons to an acre exceed 1.

The healthiness or otherwise of a district *ceteris paribus*, may be naturally expected to depend upon the density of its population, but such does not hold good in this county, for in this connection it should be remembered that areas included in most of our urban districts extend considerably beyond their most populous centres, and are essentially rural in character, being in many instances sparsely or unpopulated mountainous ridges separating the various valleys. Of our rural districts, it is only those of Cowbridge, a portion of Bridgend, and Gower, that are truly rural in every respect.

## BIRTHS.

In populations of less than 1,000, annual rates, unless extending over a period of five or ten years, have but little significance. The births registered during the year were 18,158, as compared with 20,006 for 1893, and were in the proportion of 33·5 per 1,000 living; of these 13,311 were in urban and 4,847 in rural districts, giving a birth-rate for the former of 33·7, and for the latter of 33·3 per 1,000, on the estimated population. The County rate exceeds by 3·9 that for England and Wales, which was 29·6 or 1·2 less than in 1893. The local figures and rates are given in Table I., but the information as to sexes is incomplete in Neath Borough, Gower, Llangyfelach, and Newport. The birth-rates vary considerably from 42·7 to 20·2, and they exceed 40 in Mountain Ash (42·7), Maesteg (40·1), while the lowest were those for Oystermouth (20·2), Porthcawl (22·2), Caerphilly (22·8), Gower (23·1). The birth-rate for the rural is higher than that for the urban districts, which appears to be somewhat of an anomaly, but bears out the truth of what I have said before that many of our rural districts are urban in character. The high birth-rate for the county, though lower than in previous years, is accounted for by the large artisan population, the predominance of young adults, and the early marriages for which its mining districts are noted. Generally speaking it was high in mining districts and low in agricultural and residential parts of the county. In the following table are shewn the average birth-rate of the administrative county and of the urban and rural districts respectively for the three years 1892–1894, together with the corresponding rates for England and Wales, and for the large towns in the kingdom :—

YEAR.	Birth-rate per 1,000 Population.				
	Glamorganshire.			England and Wales.	
	General.	Urban.	Rural.	General.	33 Great Towns.
1892	35·5	36·8	34·2	30·5	31·9
1893	35·7	34·8	37·9	30·8	31·9
1894	33·5	33·7	33·3	29·6	30·7

## DEATHS.

The number of deaths registered amounted to 9,176, or 818 less than in the previous year, of these 6,667 occurred in Urban and 2,509 in Rural Districts, giving death rates of 16·8 and 17·1 respectively. This gives a County rate of 16·9, which is less by 2·2 per 1,000 than in 1893, but higher by ·7 than that for England and Wales. The death rate for England and Wales was not only the lowest ever recorded, but so much as 1·5 per 1,000 below the lowest previous rate, viz. :—18·1 in 1888; it was also about 2·6 per 1,000 below the mean annual rate during the preceding ten years. The death rate in the 33 great towns of the kingdom with a population estimated at 10,458,442 was 18·1 per 1,000. There is a considerable difference in the death rate of the different districts ranging from 8·6 to 22·1. The highest death rates in the Urban Districts were Cowbridge (21·6), Mountain Ash (20·9), Merthyr (19·8), Aberdare (18·04); and in the Rural Districts, Merthyr (22·1), Pontardawe, East (19·4), Llanelly-Borough and Parish of Loughor (17·4), while the lowest in Urban Districts were Penarth (8·6), Barry and Cadoxton (10·9), Caerphilly (11·9), Glyncoirug (12·6), Margam (13·7); and in the Rural Districts,



Cowbridge (12·6), Bridgend (13·0), and Gower (13·7). The local rates and figures are given in Table I., where notice is taken of deaths which occurred in Workhouses and in the County Asylum, of persons not belonging to the districts where they are situated, but particulars as to sexes are omitted in the reports from Aberavon, Neath Borough, Garw and Ogmore, Glyncoirwg, Margam, Mountain Ash, Penarth, Porthcawl, Gower, Llangyfelach, and Newport.

YEAR.	Death-rate per 1,000.					
	Glamorganshire.			England and Wales.		
	General.	Urban.	Rural.	General.	Town Districts.	Country Districts.
1892	17·1	18·0	16·2	19·0	19·5	18·1
1893	19·1	19·2	19·0	19·4	20·2	17·4
1894	16·9	16·8	17·1	16·6	17·1	15·6

#### MORTALITY AT DIFFERENT AGES.

Of the 9,176 deaths registered in the County, 3,073 were under one year of age, 3,993 of persons between the ages of 1 and 65, and 1,141 persons aged 65 and upwards. Particulars of mortality at different ages, *as far as could be ascertained* are given below:—

#### DEATHS AT SUBJOINED AGES.

DISTRICTS.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	At all ages.
Urban .. ..	2,346	777	218	305	1,449	661	5,756
Rural .. ..	727	311	96	167	670	480	2,451
Administrative County ..	3,073	1,088	314	472	2,119	1,141	8,207

The difference between 9,176 and 8,207 *i.e.*, 969, represents the unclassified deaths above 1 year at Aberdare, the unclassified deaths at the Albion Colliery Disaster, deaths during the first quarter and Maesteg, &c., &c.

#### DEATH-RATE AT SUBJOINED AGES PER 1,000 LIVING.

DISTRICTS.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	At all ages.
Urban .. ..	7·038	2·331	0·654	0·915	4·347	1·983	16·8
Rural .. ..	4·362	1·866	0·576	1·002	4·02	2·88	17·1
Administrative County ..	5·70	2·098	0·66	0·958	4·18	2·43	16·9

## INFANT MORTALITY.

The number of deaths of infants under one year of age was 3,073, of these 2,346 occurred in the urban and 727 in the rural districts. This shews a marked difference as compared with last year, and gives an infant mortality rate of 168·1, that for 1893 being 155·1. In the urban districts the rate was 174·7 and in the rural districts 149·9. The corresponding rate for England and Wales was 137, and for the 33 large towns 152, thus :—

YEAR.	Deaths in Children under 1 year per 1,000 reg. births.				
	Glamorganshire.			England and Wales.	
	General.	Urban.	Rural.	General.	33 Large Towns.
1892	150·4	168·6	132·2	147	163
1893	155·1	168·4	135·0	159	182
1894	168·1	174·7	149·9	137	152

Here again a great difference is observed ranging from 66·0 to 225. The rate exceeded 200 per 1,000 registered births in two districts only, viz. :—Porthcawl 225 and Ystradyfodwg 203. It was lowest in Penarth (66·0), Cowbridge Borough (93·7), and in Cowbridge Rural (95·4), but in no other instance was it below 100. In only 14 of the 32 districts was it below that for England and Wales.

## ZYMOTIC DISEASES.

The seven principal Zymotic Diseases—Smallpox, Measles, Scarlet Fever, Diphtheria and Croup, Whooping Cough, Fever, and Diarrhœa—caused 680 deaths, corresponding to a county rate of 1·3 per 1,000, and to an average of 1·2 for urban and 1·4 for rural districts. The county rate is exceedingly satisfactory and is less by 1·1 per 1,000 than that for 1893, and by 0·4 than that for England and Wales, which was 1·76 and by 1·1 than that for the 33 great towns. In 1893 the number of deaths caused by Zymotic Diseases was 1,289, and the highest mortality was assigned to Fevers, Diarrhœa and Measles, whilst in 1894 there was a marked diminution in the mortality from these diseases, the only increase being from Whooping Cough.

	Smallpox.	Measles.	Scarlet Fever.	Diphtheria and Croup.	Whooping Cough.	Fever.	Diarrhœa.	Total.
Urban .. .. .	2	43	37	97	94	113	89	475
Rural .. .. .	—	29	18	34	76	35	13	205
Administrative County .. .. .	2	72	55	131	170	148	102	680

The highest rates are recorded from Merthyr Urban (3·0), Llangyfelach (2·8), Neath Borough (2·0), Mountain Ash, Pontypridd, Cowbridge Rural and Pontardawe East (1·9). In the parishes of Llanfedw and Rhydywern the mortality was nil. Low rates were recorded from Gower (0·2), Pontardawe West (0·2), Barry, Briton Ferry and Merthyr Rural (0·5), Maesteg and Porthcawl (0·6), Ystradyfodwg, Penarth and Margam (0·7).

Particulars of the local rates and figures are included in Tables I. and II., and the accompanying table gives the rate for each disease in a form admitting of comparison with other areas :—

1894.	Death-rates per 1,000 living.				
	Glamorganshire.			England and Wales.	
	General.	Urban.	Rural.	General.	33 large Towns.
Smallpox .. .. .	0·002	0·005	0·00	0·02	0·04
Measles .. .. .	0·11	0·108	0·13	0·38	0·63
Scarlet Fever .. ..	0·105	0·09	0·12	0·16	0·21
Diphtheria and Croup ..	0·23	0·24	0·23	0·28	0·38
Whooping Cough .. ..	0·33	0·23	0·42	0·39	0·48
Fever.. .. .	0·26	0·28	0·24	0·16	0·19
Diarrhoea .. .. .	0·16	0·22	0·09	0·34	0·51
Seven principal Zymotic Diseases. }	1·30	1·20	1·40	1·76	2·44

In the following table comparative figures are given for the past 3 years, together with corresponding figures for England and Wales and the 33 large towns :—

Years.	Deaths from Zymotic Diseases per 1,000 living.				
	Glamorganshire.			England and Wales.	
	General.	Urban.	Rural.	General.	33 Large Towns.
1892	2·0	2·2	1·9	1·9	2·63
1893	2·32	2·56	2·07	2·47	3·17
1894	1·30	1·20	1·40	1·76	2·44

## SMALL POX.

Thirty-seven cases of this disease were notified, two proving fatal, as compared with 48 cases and five proving fatal in 1893. The disease was distributed as follows:—Aberavon (16), Barry (6), Briton Ferry (3), Caerphilly (3), Margam (1), Ystradyfodwg (2), Neath Rural (4), and Llandilo-Talybont (2). It was imported to Aberavon, Barry on three different occasions, and to Margam from abroad. To Caerphilly it was imported from the neighbourhood of Bristol, to Briton Ferry and Llandilo-Talybont from Aberavon. Of the 37 cases 18 were treated in hospitals, the remaining 19—16 at Aberavon—were treated at their homes, and 3 at Caerphilly in a house converted into a temporary hospital. The details of the outbreaks are given in the local summaries.

..

The outbreak at Aberavon, where the two fatal cases occurred, almost became an epidemic, and might have been prevented had there been in readiness suitable isolation accommodation, for it is reported that it was found almost impossible to treat patients at their own homes and prevent friends and relations from visiting them. On all occasions the Medical Officers of Health acted with promptness, and made use of all available precautionary measures, which in several districts, however, were found utterly inadequate. Such was the case at Aberavon, Briton Ferry, and Caerphilly. Many of the reports are silent upon the important question of vaccination, but a few particulars are given from the districts which suffered from the malady.

The Medical Officer of Health for Aberavon writes:—

“No recently vaccinated person acquired the disease, though many of them were in constant attendance upon the sick. The fatal cases occurred only amongst the unvaccinated or where vaccination had been practised insufficiently, and at a period so remote that its protective influence had vanished. In young persons who had been vaccinated the symptoms were universally mild, and in a few cases particularly so.”

Dr. Mitchell, Llandilo-Talybont, writes:—“The infection was beyond doubt imported to Gorseinion by a visitor, who herself had not been affected, but who had been in contact with a fatal case at Aberavon. The patients . . . . . were removed as soon as possible to the Swansea Fever Hospital. . . . . Most of the inmates of adjacent houses were revaccinated and all unvaccinated children in Gorseinion were instantly vaccinated. It is gratifying to state that both patients were vaccinated in infancy and that both made excellent recoveries. Their two children, one a babe at the breast, and the other under two years of age had both been vaccinated previous to the outbreak and both escaped smallpox.”

At Caerphilly the first case was promptly isolated in an empty house, and Dr. Thomas states that “soon after a sister-in-law, who had in the meantime been revaccinated, had the complaint and was removed to the same building. This was of an unusual occurrence, inasmuch as the period of latency or incubation was 15 days after all intercourse with the first case had ceased.”

## SCARLET FEVER.

There were notified from this disease 1,726 cases, 55 proved fatal, corresponding to a case mortality of 3·2 per cent., and a County rate of 0·101—in the urban districts ·09 and in the rural 0·12—as compared with 0·16 for England and Wales. The number of cases notified, deaths, and mortality rate, are given in the accompanying table:—



DISTRICTS.					Cases.	Deaths.	Death-Rate per 1,000.
URBAN.							
Aberavon	..	..	..	..	1	0	0·0
Cowbridge	..	..	..	..	0	0	0·0
Neath	..	..	..	..	5	0	0·0
Aberdare	..	..	..	..	No report	2	0·05
Barry and Cadoxton	..	..	..	..	103	2	0·1
Bridgend	..	..	..	..	7	0	0·0
Briton Ferry	..	..	..	..	10	0	0·0
Caerphilly	..	..	..	..	9	0	0·0
Garw and Ogmore	..	..	..	..	26	0	0·0
Glyncorrwg	..	..	..	..	29	1	0·4
Maesteg	..	..	..	..	46	3	0·3
Margam	..	..	..	..	24	1	0·3
Merthyr	..	..	..	..	211	11	0·1
Mountain Ash	..	..	..	..	92	0	0·0
Oystermouth	..	..	..	..	56	1	0·2
Penarth	..	..	..	..	11	0	0·0
Pontypridd	..	..	..	..	68	4	0·1
Porthcawl	..	..	..	..	2	0	0·0
Ystradyfodwg	..	..	..	..	441	12	0·1
RURAL.							
Bridgend and Cowbridge:—							
Bridgend Division	..	..	..	..	22	0	0·0
Cowbridge	..	..	..	..	5	0	0·0
Cardiff	..	..	..	..	34	0	0·0
Gower	..	..	..	..	7	0	0·0
Merthyr	..	..	..	..	78	3	0·2
Neath	..	..	..	..	43	3	0·1
Pontardawe—East Division	..	..	..	..	0	0	0·0
„ West	..	..	..	..	11	1	0·2
Llantrisant and Llantwit Fardre	..	..	..	..	117	2	0·2
Swansea—Llangyfelach Division	..	..	..	..	109	7	0·6
„ Llandilo Talybont Division	..	..	..	..	79	2	0·1
Llanelly—Borough and Parish of Loughor	..	..	..	..	80	0	0·0
Newport—Parishes of Llanfedw and Rhydywern	..	..	..	..	0	0	0·0

Of the cases reported only two were removed and treated in an Isolation Hospital. It seems that our Isolation Hospitals are seldom made use of in Scarlet Fever, and as long as this inactivity continues amongst Sanitary Authorities whose districts are provided with Isolation Hospitals, one cannot expect the disease to be kept under control. References are made in several of the reports of the impossibility of effectual isolation at home, and to the want of suitable provisions of isolation and disinfection. Schools were closed in Merthyr, Tonyrefail, in the Llantrisant and Llantwit Fardre district, and in the parish of Loughor. At Barry the disease was prevalent more or less throughout the year, but was of an exceedingly mild type. At Bridgend schoolmasters were warned not to admit children from infected houses. In Garw and Ogmore the disease did not assume an epidemic form. To Maesteg it was imported from Llanelly, and several cases of a severe form occurred. At Margam a thorough inspection of all infected houses was made, and generally the disease could be traced to previous cases. At Merthyr it was less prevalent than in the previous year. The disease was epidemic at Oystermouth and Tonyrefail, and prevalent at Barry, Merthyr, Mountain Ash, Ystradyfodwg, Merthyr Rural, Neath Rural, Llangyfelach, Llandilo-Talybont, and Llanelly. Cases were reported from all the districts except two



viz., Cowbridge, and the parishes of Llanfedw and Rhydywern. The spread of this disease is attributed to the following causes:—

- (a) The carelessness of parents.
- (b) Intercourse at markets, chapels and schools.
- (c) Imperfect isolation and disinfection.
- (d) The reckless manner in which relatives and friends visit infected houses.

It is believed by the working people generally in this county that most children are destined to contract Scarlet Fever sooner or later, and that if an epidemic of a mild type occurs, it is their bounden duty to give their children a chance of catching it, so as to acquire immunity before an epidemic of a more malignant type visits the locality.

Dr. Mitchell, Gorsemon, reports that he has met with many cases where parents have taken their children to infected houses under this mistaken sense of duty.

It is satisfactory to note, however, that the number of cases and deaths notified during the year were far less than in the previous year, the death rate was reduced by one half, and was lower by 0.05 than that for England and Wales.

## MEASLES.

It is only in Neath Urban and Rural districts that Measles has been scheduled among the notifiable diseases, consequently there is no reliable information as to the amount of sickness, and generally the first official information which the Medical Officer of Health receives is that of a death certificate. In Neath Urban and Rural districts 528 and 985 cases were notified. The disease is credited with 72 deaths, giving a death rate of 0·11 as compared with 212 and a death rate of 0·46 in 1893. Of the 680 deaths from the seven principal zymotic diseases 10·6 per cent. were due to Measles. The rate for the whole of England and Wales was 0·38, which is much above that of the County.

DISTRICTS.	Cases.	Deaths.	Death-Rate per 1,000.
URBAN.			
Aberavon .. .. .	..	1	0·14
Cowbridge .. .. .	..	..	..
Neath .. .. .	528	3	0·26
Aberdare .. .. .	..	7	0·16
Barry and Cadoxton .. .. .	..	..	..
Bridgend .. .. .	..	..	..
Briton Ferry .. .. .	..	..	..
Caerphilly .. .. .	..	5	0·35
Garw and Ogmore .. .. .	..	1	0·006
Glyncorrwg .. .. .	..	..	..
Maesteg .. .. .	..	..	..
Margam .. .. .	..	..	..
Merthyr .. .. .	..	..	..
Mountain Ash .. .. .	..	..	..
Oystermouth .. .. .	..	..	..
Penarth .. .. .	..	..	..
Pontypridd .. .. .	..	13	0·36
Porthcawl .. .. .	..	..	..
Ystradyfodwg .. .. .	..	13	0·12

DISTRICTS.					Cases.	Deaths.	Death-Rate per 1,000.
RURAL.							
Bridgend and Cowbridge—							
Bridgend Division .. .. .					..	..	..
Cowbridge Division .. .. .					..	..	..
Cardiff .. .. .					..	2	0 105
Gower .. .. .					..	..	..
Merthyr .. .. .					..	..	..
Neath .. .. .					985	11	0 46
Pontardawe East .. .. .					..	..	..
Pontardawe West .. .. .					..	..	..
Llantrisant and Llantwit Fardre .. .. .					..	1	0 105
Swansea—Llangyfelach Division .. .. .					..	14	1 33
„ Llandilo Talybont Division .. .. .					..	1	0 07
Llanelly—Borough and Parish of Loughor .. .. .					..	..	..
Newport—Parishes of Llanfedw and Rhydywern.. .. .					..	..	..

The highest mortality occurred at Llangyfelach (1·33), Neath Rural (0·46), Pontypridd (0·36), Caerphilly (0·31). The disease was epidemic in the Neath Urban and Rural, Pontypridd (Cilfynydd and Treforest) and at Llangyfelach, it was prevalent in Caerphilly (Taff's Well), Ystradyfodwg, Pontardawe East and West Divisions. The elementary schools were closed at Cilfynydd and Treforest. Beyond specifying the number of deaths most of the reports are silent as regards measles. Its notification is again recommended by the Medical Officers of Health for Cowbridge Rural and Margam. I would again remark that it is a common belief that measles is a simple ailment peculiar to all children, and comparatively free from all risks, and seldom followed by fatal results; indeed it is the practice among many parents, when one of their children sickens with the fever to encourage the others to take it in order to have it over. The average annual rate of mortality from this disease is very considerable. Its complications and sequelæ are oftentimes most disastrous.

#### DIPHTHERIA AND MEMBRANOUS CROUP.

There were notified 159 cases of diphtheria and 55 deaths, 56\* cases of croup and 76 deaths, making a total of 215 cases and 131 deaths, corresponding to a death-rate of 0·24—0·24 for Urban and 0·24 for Rural Districts—as compared with 0·27 in 1893, and with 0·28 for England and Wales. The death-rate from these diseases for England and Wales exceeded that for this County by 0·04 per 1000. The case mortality for diphtheria was 34·9, a little over one-third of the total number of cases. In the case of croup it appears that the disease was very irregularly notified, the number of deaths exceeding the number notified by 20. (Tables II. and III.) None of the cases were removed to hospitals. (Table III.)

\* Evidently all the cases were not notified.

DISTRICTS.					Cases.	Deaths.	Rate per 1,000.
URBAN.							
Aberavon	..	..	..	..	2	1	0.14
Cowbridge	..	..	..	..	—	—	—
Neath	..	..	..	..	10	8	0.69
Aberdare	..	..	..	..	—	5	0.11
Barry and Cadoxton	..	..	..	..	10	6	0.31
Bridgend	..	..	..	..	7	1	0.19
Briton Ferry	..	..	..	..	2	—	—
Caerphilly	..	..	..	..	4	2	0.14
Garw and Ogmore	..	..	..	..	—	1	0.06
Glyncorrwg	..	..	..	..	—	—	—
Maesteg	..	..	..	..	1	1	0.10
Margam	..	..	..	..	6	3	0.42
Merthyr	..	..	..	..	47	11	0.16
Mountain Ash	..	..	..	..	12	12	0.58
Oystermouth	..	..	..	..	2	—	—
Penarth	..	..	..	..	17	8	0.59
Pontypridd	..	..	..	..	6	9	0.22
Porthcawl	..	..	..	..	—	—	—
Ystradyfodwg	..	..	..	..	21	29	0.26
RURAL.							
Bridgend and Cowbridge—							
Bridgend	..	..	..	..	9	3	0.20
Cowbridge	..	..	..	..	0	1	0.16
Cardiff	..	..	..	..	36	8	0.42
Gower	..	..	..	..	3	2	0.27
Merthyr	..	..	..	..	8	1	0.06
Neath	..	..	..	..	3	7	0.29
Pontardawe—East	..	..	..	..	2	2	0.24
Pontardawe—West	..	..	..	..	—	—	—
Llantrisant and Llantwit Fardre	..	..	..	..	4	4	0.40
Swansea—Llangyfelach Division	..	..	..	..	—	2	0.18
„ Llandilo Talybont Division	..	..	..	..	2	3	0.20
Llanelli—Borough and Parish of Loughor	..	..	..	..	1	1	0.23
Newport—Parishes of Llanfedw and Rhydywern	..	..	..	..	—	—	—

The Etiology of Diphtheria and Croup is still a debatable question, and it would be well perhaps to summarise the observations contained in those few reports which have reference to the subject.

Neath Urban.—Number of cases 10. In two instances no sanitary defects were detected. In two instances drainage was good but there was scarcity of water supply and the walls of the bedrooms were exceedingly damp, and there was an old cesspool at the back of the premises giving off a very disagreeable odour. Another case occurred in a house very much overcrowded and where the drains were insufficiently ventilated.

Bridgend.—Diphtheria cases were generally found to be associated with similar defects, such as choked and unventilated drains allowing the escape of sewer gases.

Caerphilly.—The cases of Diphtheria were caused by dampness of soil together with decomposition of vegetable and other refuse.

Margam.—Two cases were reported and there were no sanitary defects to account for their origin.

Merthyr.—Forty-seven cases, of which 28 occurred at Pantyscallog where it was epidemic in 1893. In every instance which occurred a local cause, either imperfect drain traps or broken closet pans, were discovered.

Penarth.—Diphtheria was the chief zymotic disease notified during the year, and was attributed to some insanitary condition either of drainage or soil.

Cowbridge Rural.—To an accumulation of slops within a few feet of a back door is attributed one case.

Cardiff.—Defective drains and insanitary conditions in general were noticed to be closely associated with the prevalence of the disease.

Gower.—The origin of the Diphtheria and Croup cases is reported as obscure, the two cases of the former occurred in the same house simultaneously and to all appearance spontaneously.

Pontardawe East.—Here the two fatal cases of Croup occurred in children of the same family, resident in a detached cottage within ten days of each other. They are attributed to local influences, there being no throat affection at the time in the locality.

No other particulars are supplied. From the experience I have gained of several epidemics of Diphtheria it appears to me that all children suffering from a sore throat should be excluded from school and closely observed for a time, and it is a fact that has been frequently observed and now beyond dispute that virulent diphtheria is apt to appear shortly after the appearance of ill-defined but infectious sore throat, and it has occurred to me that the compulsory notification of this form of illness is most desirable, in other words that "Diphtheria, Membranous Croup and Infectious Sore Throat" should be substituted for "Diphtheria and Membranous Croup," as now given in the Infectious Disease (Notification) Act. Bacteriological examinations, as now conducted by the Local Government Board and other institutions, is of the greatest importance in cases of doubtful throat ailments, for the bacillus of Diphtheria is often found where the existence of a membrane is doubtful.

## FEVERS.

In Tables A. and B. of the Local Government Board "Fevers" appears at the head of five columns, the headings of which are "Typhus," "Enteric or Typhoid," "Continued," "Relapsing," and "Puerperal." Twenty-one cases of Continued Fever were reported, 13 of these were from Bridgend and neighbourhood, 6 from Ystradyfodwg, 1 from Barry, and 1 from Neath. It seems probable that a large proportion of these were really Typhoid.

## TYPHUS FEVER.

Five cases of this fever were reported from Merthyr. The first subjects of the malady were two hop-pickers returning from hop-picking in Herefordshire. They were promptly removed to the Fever Hospital. Two females who attended to them before their removal together with a nurse at the hospital were also affected. All precautionary measures were observed and no spread of this most infectious fever took place.



## ENTERIC OR TYPHOID FEVER.

There were 703 cases notified and 105 deaths attributed to this cause, corresponding to a death rate of 0·19, 0·19 for urban and 0·19 for rural districts, as compared with a county rate of 0·28 in 1893. This death rate is slightly in excess to that for England and Wales. The amount of sickness and mortality are shewn in the following table:—

DISTRICTS.	Cases.	Deaths.	Death-Rate per 1,000.
URBAN.			
Aberavon .. .. .	1	..	..
Cowbridge .. .. .	3	1	0·8
Neath .. .. .	7	1	0·08
Aberdare .. .. .	..	1	0·02
Barry and Cadoxton .. .. .	17	..	..
Bridgend .. .. .	14	3	0·55
Briton Ferry .. .. .	14	2	0·33
Caerphilly .. .. .	12	1	0·07
Garw and Ogmore .. .. .	19	5	0·37
Glyncorrwg .. .. .	2	1	0·20
Maesteg .. .. .	10	..	..
Margam .. .. .	..	..	..
Merthyr .. .. .	146	19	0·29
Mountain Ash .. .. .	58	5	0·23
Oystermouth .. .. .	6	2	0·46
Penarth .. .. .	6	1	0·07
Pontypridd .. .. .	32	6	0·17
Porthcawl .. .. .	..	..	..
Ystradyfodwg .. .. .	155	28	0·26
RURAL.			
Bridgend and Cowbridge:—			
Bridgend Division .. .. .	35	6	0·38
Cowbridge Division .. .. .	1	1	0·16
Cardiff .. .. .	28	6	0·35
Gower .. .. .	2	..	..
Merthyr .. .. .	15	1	0·06
Neath .. .. .	38	3	0·13
Pontardawe East .. .. .	22	5	0·60
Pontardawe West .. .. .	2	..	..
Llantrisant and Llantwit Fardre .. .. .	9	3	0·31
Swansea—Llangyfelach Division .. .. .	30	2	0·17
„  Llandilo-Talybont „ .. .. .	14	2	0·13
Llanelly—Borough and Parish of Loughor .. .. .	5	..	..
Newport—Parishes of Llanfedw and Rhydywern .. .. .	..	..	..

In 1893 this fever was epidemic in several districts; during 1894 there were but few epidemics and the disease was more evenly distributed. The highest rates were those for Cowbridge Borough (0·8), Pontardawe East (0·6), Bridgend Urban (0·55), Oystermouth (0·46), Garw and Ogmore (0·37), Bridgend Rural (0·38). No deaths were reported from Aberavon, Maesteg, Margam, Porthcawl, Gower, Pontardawe West, Loughor and Newport, while low rates were recorded at Aberdare (0·02), Merthyr Rural (0·06), Neath (·08). Here, again, it would be useful to give the causes to which the cases are attributed by the various Medical Officers of Health. One localised outbreak at Coychurch was the subject of a special report by myself and Dr. Randall, and where the 10 cases were undoubtedly caused by the drinking of polluted well water, which well has since been closed.



It was a surface well, unprotected and liable to pollution, and a small heap of manure in a garden across the road presented a possibility of being the specific cause of the outbreak. On analysis the water shewed considerable organic pollution, and after its closure no more cases occurred.

Cowbridge Borough :—The two cases were attributed to an unventilated drain and cesspool and to polluted water supply.

Neath Borough :—One case was attributed to the escape of sewer gas, and two to drinking polluted water.

Caerphilly :—Fever was again prevalent in the Taff's Well Ward, and Dr. Thomas writes, " I still maintain that the water supply must be regarded as the principal cause of the disease inasmuch as the wells are liable to pollution from cesspools, &c., in their immediate vicinity." In the Town Ward the cases were attributed to defective drainage, sewer gas in one instance finding its way out at the very door of the dwelling. In the Ystrad Ward (Llanbradach) the probable cause was the drinking of water liable to pollution; on analysis this water was found to contain sewage matter.

Garw and Ogmore :—In connection with most of the cases structural defects of drainage were noticed.

Maesteg :—Nine cases out of the ten occurred in a row of cottages, and were attributed to accumulation of slop water, and to the bursting of a sewer which discharged its contents at the back of these premises.

Merthyr Urban :—Here the fever was more than usually present in certain localities. Imperfection of sanitary appliances in closets, yards, drains were in every instance discovered.

Mountain Ash :—Typhoid fever is endemic in this district. During the first quarter 32 cases were notified, 10 in the second, 9 in the third, and 7 in the fourth. They are attributed to local conditions such as defective drains. No other particulars are given.

Oystermouth :—One case attributed to defective drainage, and four others were probably caused by drinking water from a well open to pollution from manure, etc.

Penarth.—The Cases are said to have been imported or attributed to defective house drainage.

Pontypridd.—In Treforest the disease was associated with foul and defective drainage, so also were the cases at Rhydfelen and Upper Boat, where in addition there were suspicious wells.

Ystradyfodwg.—Two-thirds of the cases could be attributed to broken or leaking drain traps. At Tylor's Town the fever prevailed most where the retaining wall at the back was as high as the eaves of the houses, and where the living room and pantry on account of their temperature being higher than the outside air, attracted the sewer gas.

Cowbridge Rural.—Two cases were attributed to drinking polluted water, and one to personal contagion.

Cardiff Rural.—Here polluted water is assigned as the cause of most of the cases, one is attributed to a foul ditch and offensive piggery.

Gower.—The two cases which occurred simultaneously in the same house are supposed to have been caused by an offensive odour from a neighbouring piggery.

Neath Rural.—Most of the persons who suffered from typhoid are said to have first suffered from influenza, then to have developed Enteritis.

Pontardawe East.—In the end of 1893 a case of typhoid was imported from the Rhondda. It was a severe case from the first, and to aggravate matters the house was in a bad state of affairs with altogether very insanitary surroundings. All available precautionary measures were taken, but notwithstanding this the disease spread, and soon assumed an epidemic form of a severe type extending over the neighbouring localities, all of which were stated to have been either faulty or deficient in water supply, and Dr. Thomas writes that " the line of invasion of this outbreak clearly indicates the places that would probably be attacked in the event of a waterborne disease (particularly cholera) being imported into the district.

Llangyfelach.—Five cases were attributed to accumulated refuse from a piggery and fowl house, four to defective drains and overcrowding, and six to contaminated water obtained from an open well and made use of by cattle for drinking.

Llandilc-Talybont.—Many cases are attributed to polluted water, accidental contamination of food and defective drainage.

Llanelly.—Borough and Parish of Loughor. The three cases at Upper Loughor were attributed to drinking polluted well water.

### PUERPERAL FEVER.

The number of cases notified was 76, and the number of deaths 41, giving a case mortality of 58·9 per cent. and a death rate of 2·25 per 1,000 registered births. The corresponding figures for 1893 were cases 92, deaths 67, case mortality 72 per cent., and death-rate of 3·34 per 1,000 births. This decrease of cases and deaths is a very satisfactory item to chronicle. Particulars of cases notified, deaths, case mortality and death-rate per 1,000 births are shewn in the following table :—

DISTRICTS.				Cases.	Deaths.	Case-Mortality per cent.	Death-Rate per 1,000 Births.
URBAN.							
Aberavon	..	..	..	3	..	..	..
Cowbridge	..	..	..	1	1	100	0·8
Neath ..	..	..	..	..	..	..	..
Aberdare	..	..	..	..	2	..	0·1
Barry and Cadoxton	..	..	..	3	..	..	..
Bridgend	..	..	..	1	..	..	..
Briton Ferry	..	..	..	4	..	..	..
Caerphilly	..	..	..	..	1	..	0·05
Garw and Ogmore..	..	..	..	3	4	..	0·20
Glyncorrwg	..	..	..	..	..	..	..
Maesteg	..	..	..	..	..	..	..
Margam	..	..	..	..	..	..	..
Merthyr	..	..	..	21	8	38	0·4
Mountain Ash	..	..	..	4	4	100	0·2
Oystermouth	..	..	..	..	..	..	..
Penarth	..	..	..	1	1	100	0·05
Pontypridd	..	..	..	5	3	60	0·15
Porthcawl	..	..	..	1	1	100	0·05
Ystradyfodwg	..	..	..	17	10	59	0·5
RURAL.							
Bridgend and Cowbridge—Bridgend	..	..	..	..	..	..	..
„ Cowbridge	..	..	..	..	..	..	..
Cardiff	..	..	..	..	..	..	..
Gower..	..	..	..	..	..	..	..
Merthyr	..	..	..	2	1	50	0·05
Neath ..	..	..	..	2	3	..	0·15
Pontardawe, East ..	..	..	..	..	..	..	..
„ West..	..	..	..	..	..	..	..
Llantrisant and Llantwit Fardre	..	..	..	1	..	..	..
Llangyfelach	..	..	..	3	1	33·3	0·05
Llandilo-Talybont ..	..	..	..	2	1	50	0·05
Borough and Parish of Loughor	..	..	..	2	..	..	..
Parishes of Llanfedw and Rhydywern	..	..	..	..	..	..	..
Administrative County				76	41	58·9	2·25
Administrative County of Durham*				90	41	45·5	1·5
„ „ Cheshire*				..	44	..	2·7

\* From the Annual Reports of Drs. Hill and Vacher, the County Medical Officers.

This year again I intend to follow the same course and put on record the remarks of the few Medical Officers of Health who touch upon the subject.

The Medical Officer of Health of Garw and Ogmore remarks:—"Three non-fatal cases of this disease were reported during the year, 2 in Garw and 1 in the Ogmore ward. The midwives were stopped for three months and the room and bedding fumigated with sulphur."

Dr. Dyke remarks:—"A certain number of cases have occurred, but it has not given any indication of having been spread by contagion. This is a happy result, as you are aware that I have had to inform you that in my opinion the midwives attending certain cases were distinctly to blame, as being clothed in garments used upon occasions such as funerals and charged with the odours of the death chamber."

The Medical Officer for Neath Rural states:—"Two cases occurred, one of which proved fatal, both were attended by the same midwife, who was ordered not to attend any lying-in cases for a period of six weeks. This she did with the good result that no more cases occurred."

The Medical Officer for Loughor remarks:—"The two cases in Loughor parish were attended by the same nurse. On enquiries being made it was found that in each case the midwife was in the habit of laying out the bodies of the dead. It often happens that death had resulted from an infected disease, and the risk of carrying infection by nurses to parturient women in these cases is very great. The attention of the legislature has been called to this on many occasions, but as yet nothing has been done to prevent the loss of so many lives."

None of the other Medical Officers of Health refer to Puerperal Fever nor are any particulars furnished from several districts where many cases and deaths occurred. There seems to be an apathy on the part of medical practitioners to notify cases of Puerperal Fever; surely this is not as it should be, for if the cases are not notified to the Medical Officer of Health he can be of no service in the matter unless, of course, he hears of their occurrence through other sources. In the report for Garw and Ogmore only three cases were reported, and not one of these was fatal, but in Table A. of the same report it is stated that there are four deaths from this fever. It will be remembered that this was the district where this fever was epidemic and occasioned the deaths of 16 mothers in 1893. It is, however, satisfactory to note that only 4 deaths occurred in 1894, as compared with four times this number in the previous year, and this I attribute to a greater care exercised over the management of the untrained and oftentimes ignorant midwives, and to the disinfection and burning of infected articles of bedding and clothing, which I learnt on enquiry was not the practice in previous years.

## ERYSIPELAS.

The number of cases notified from Erysipelas was 377, of which 17 or 4·9 per cent. proved fatal. This mortality corresponds to a County Rate of 0·03—0·04 for Urban and 0·01 for Rural Districts. The greatest number notified were Merthyr (99), Barry and Cadoxton (37), and the highest mortality, Merthyr (6). This was also the case singularly enough in 1893. The notification of Erysipelas is important in connection with nurses, midwives, and others coming in contact with parturient women and surgical cases. The disease is generally associated with insanitary surroundings, and any premises in which it appears should be examined most carefully.

## WHOOPIING COUGH.

Except in the Cardiff Rural District Whooping Cough was not notified, and consequently the extent of its prevalence has to be measured by its death record. Through it 224 deaths were caused—148 in Urban and 76 in Rural Districts—corresponding to a County death-rate of 0·39 per 1,000 as compared with 0·16 in 1893. The greatest number of deaths were from Merthyr Urban (54), Pontypridd Urban (28), Ystradlyfodwg (30), Merthyr Rural (25); of the total number of deaths 189, as far as could be ascertained, occurred in children under five years of age. Whooping Cough is a disease in which the infection is most insidious, and, whilst requiring more precautions than



any, receives the least. Not only is Whooping Cough a cause of a large direct mortality, but also of a considerable indirect mortality, leaving as it often does the child an easy prey to any affection it may contract, especially lung troubles and phthisis.

### DIARRHŒAL COMPLAINTS (Diarrhœa, Dysentery and English Cholera.)

Diarrhœa is not usually notified, and the extent of its ravages can only be measured by its death roll. Diarrhœa is often premonitory of Cholera, and in the third quarter of the year, acting under the advice of the Local Government Board, the Sanitary Authorities of Barry and Cadoxton, Margam, Ystradyfodwg, Cowbridge, and Cardiff Rural, included this disease amongst those that are notified. The deaths assigned to this disease numbered 178, of which 165 occurred in urban and 13 in rural districts, a very satisfactory reduction as compared with 456 deaths—397 in urban and 99 in rural districts—in 1893. The county death rates for 1894 and 1893 were 0·33 and 0·81 as compared with those for England and Wales 0·34 and 0·96 during the same years respectively. Fully 138, or 77 per cent., out of the 178 deaths occurred in children under 5 years of age. Its prevalence under favourable conditions is greatly influenced by injudicious feeding, apart from insanitary surroundings. The districts with the highest death-rates from the disease were Merthyr (1·17), Oystermouth 0·73 ; Aberavon 0·60 ; Mountain Ash 0·51 ; Cowbridge Rural 0·48 ; Neath Urban 0·43 ; and Aberdare (0·40). While in 1893 the death-rate exceeded 1·00 per 1,000 in 11 districts of the county, in 1894 this rate was exceeded in only one of the districts. It is interesting to note that diarrhœa prevailed the most, and was markedly fatal, in the worst drained districts of the county. It has been observed that the poison of diarrhœa resides in the superficial layers of the ground, but does not become active until the temperature of the ground 4 feet below the surface exceeds 56 degrees Fahrenheit, which was but seldom, if at any time, the case during last year, so that our low mortality from this disease last year is no evidence of improved sanitary conditions.

Two cases of choleraic diarrhœa occurred at Nantymoel in the beginning of October, and one proved fatal. The subjects of the attack were two brothers, who were colliers, and lodging in the same house. An examination of the house and premises was made by myself and the Medical Officer of Health, and no defects could be detected ; the drains and water supply were in perfect order, and no other member of the family had suffered. Our suspicion fell upon a ham which both brothers had partaken of, and which was found to be in a putrefactive condition, and, on being cut into, maggots were observed on the cut surface.

Bacteriological examination as to the character of the micro-organisms present was made with the following interesting results.

The cultures made from the flesh on glycerine agar gave rise to a very profuse growth of micro-organisms at first in colonies, but in a day or two coalescing to form streaks and sheets of growth. On separation by plate cultures it was found that the micro-organisms consisted almost entirely of two different varieties:—

1. A round organism considerably larger than ordinary cocci existed in preponderating quantity, formed the masses of growth described above in the cultivations. It grew with extreme rapidity at a temperature of 35 degrees Centigrade, but also at the ordinary atmospheric temperature. It was Aerobic, and probably some form of *Torula*.

2. A coccus resembling *Staphylococcus*. These existed in small numbers and apparently did not influence perceptibly the character of the growth described. The result was somewhat interesting and surprising, inasmuch the ordinary putrefactive organisms seemed absent.

From the condition in which the flesh existed, there is little doubt that it would be capable of causing severe enteritis if used in any quantity. The extraordinary abundance of this *Torula*-like organism is evidence of advanced fermentative change in the flesh, a condition likely to be associated with the production of much poisonous material of the character of ptomaines.

As will be seen from the following table, the figures this year compare very favourably with those of previous years:—

DIARRHŒA.					1892.	1893.	1894.
Urban	{ Number of Deaths .. .. .				213	379	165
	{ Rate per 1,000 of population .. .. .				0.69	0.94	0.43
Rural	{ Number of Deaths .. .. .				70	99	13
	{ Rate per 1,000 of population .. .. .				0.44	0.68	0.09

#### RHEUMATIC FEVER.

There were 24 deaths ascribed to this disease, corresponding to a County rate of 0.04. The highest rates were from Caerphilly (0.2), Cowbridge Rural (0.16), Pontardawe East (0.12).

#### PHTHISIS.

The deaths registered from Phthisis numbered 626—395 in Urban, and 231 in Rural, Districts. This equals a County death-rate of 1.1 per 1,000—0.9 for Urban, and 1.3 for Rural, Districts. The highest rates were recorded from Lanelli—the Borough and Parish of Loughor (2.9), Pontardawe West (2.5), Gower (2.1), Bridgend Urban (2.0), Pontardawe East (1.9). It was lowest in the parishes of Llanfedw and Rhydywern (nil), and in Cowbridge Borough, Garw and Ogmore, Glyncoirwg, Penarth, Ystradyfodwg, Bridgend Rural, and Merthyr. Amongst others the following particulars are included in the various reports. At Margam the same measures were taken as last year to prevent this disease from being spread to the other inmates of infected houses, and the Medical Officer of Health is of opinion that it would be advisable to add it to the notifiable diseases. In the Pontypridd District the mortality from Phthisis represented 8 per cent. of the total deaths, and the Medical Officer calls attention to its infectiousness, and to the importance of disinfecting expectoration of persons suffering from it, and to the possibility of its being conveyed from animal to man through the agency of milk and meat from tuberculosed animals. The Medical Officer of Pontardawe West has endeavoured to isolate the sick from the healthy, and has given instruction that all the expectoration should be disinfected and rendered inert.

The infectiousness of Phthisis is now generally admitted, and a great deal can be done by sanitary authorities towards reducing the mortality from this disease by improving the quality of articles of food and drink, by enforcing their building bye-laws so as to prevent the building of damp houses on damp soils, by keeping a vigilance against overcrowding and by giving directions wherever possible for the disinfection of the expectoration of patients suffering from this disease.



## BRONCHITIS, PNEUMONIA AND PLEURISY.

This group of lung diseases was during the year accountable for 1,709 deaths, corresponding to a death rate of 3·15 per thousand as compared with 3·3 in 1893. The highest rates were reported from Mountain Ash (5·8), Bridgend Urban (4·9), Pontardawe West (4·7), Merthyr (4·5). In the Llandilo-Talybont district these diseases were very prevalent at the beginning of the year and proved so fatal that the death rate per thousand was 12·4 in January and 8·6 in February, the rate for the whole year being 3·8 per thousand.

## INFLUENZA.

It is impossible to estimate the amount of sickness and mortality due to influenza as no separate figures are given, and the number of deaths are included under "all other causes." It is only in a few of the reports that reference is made to this disease. From Cowbridge Rural it is reported that Influenza during the spring and autumn assumed the type of acute inflammation of stomach and bowels, and in the colder months was accompanied with Bronchitis, Pleurisy or Pneumonia. It was prevalent in most of the districts during the first and fourth quarters, but of a milder type than in previous years.

## INJURIES.

Deaths from injuries amounted to 565 giving a rate of 1·04 per thousand as compared with 1·2 in 1893. 289 of the deaths occurred in the Albion Colliery Disaster at Cilfynydd, in the Pontypridd Urban district.

## ALL OTHER CAUSES.

Under this ill-defined heading are included 3,346 deaths or 37·5 per cent. of the total deaths, corresponding to a death rate of 6·1 as compared with 9·01 in 1893. This is a high percentage, and it appears to me that additional headings in Table A. are desirable.

TABLE OF DEATH RATES FOR THE ADMINISTRATIVE COUNTY OF GLAMORGAN,  
CLASSIFIED ACCORDING TO DISEASE AND LOCALITY.

DISTRICTS.	Small-pox.	Scarlet Fever.	Diphtheria or Croup.	Enteric or Typhoid Feve.	+Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Phthisis.	Bronchitis, Pneumonia or Pleurisy	Heart Disease.	Injuries.	All other diseases
URBAN.														
Aberavon .. .. .	0·3	0·0	0·14	..	..	..	0·14	..	0·60	1·4	0·9	1·5	0·45	8·85
Cowbridge .. .. .	..	0·0	..	0·8	0·8	..	..	..	..	0·8	2·4	4·0	..	12·8
Neath .. .. .	..	0·0	0·69	0·08	..	0·18	0·26	0·36	0·43	1·4	2·7	1·26	0·54	8·46
Aberdare .. .. .	..	0·05	0·11	0·02	..	..	0·16	..	0·40	1·6	2·7	..	..	..
Barry and Cadoxton .. .. .	..	0·1	0·31	..	..	..	..	0·05	0·25	1·0	1·9	0·35	0·30	6·3
Bridgend .. .. .	..	0·0	0·19	0·55	..	..	..	..	0·18	2·0	4·9	1·44	0·72	7·74
Briton Ferry .. .. .	..	0·0	..	0·33	..	0·16	..	..	..	1·0	3·8	1·12	0·80	9·60
Caerphilly .. .. .	..	0·0	0·14	0·07	0·07	..	0·35	0·21	0·13	0·6	1·9	0·77	0·98	5·95
Garw and Ogmore .. .. .	..	0·0	0·06	0·37	0·24	..	0·06	0·24	0·19	0·8	3·0	0·78	0·90	7·74
Glyncoarwg .. .. .	..	0·2	..	0·4	..	..	..	0·8	0·4	0·8	3·2	1·2	0·6	5·4
Maesteg .. .. .	..	0·3	0·10	..	..	..	..	0·10	..	1·8	3·7	1·6	0·4	6·9
Margam .. .. .	..	0·13	0·42	..	..	..	..	0·13	..	1·7	3·0	1·56	0·42	7·0
Merthyr .. .. .	..	0·1	0·16	0·29	0·12	0·06	..	0·58	..	1·3	4·5	1·52	..	..
Mountain Ash .. .. .	..	0·0	0·58	0·23	0·16	0·12	..	0·44	0·51	0·9	5·8	0·60	1·06	6·84
Oystermouth .. .. .	..	0·2	..	0·46	..	..	..	0·24	0·73	0·4	2·4	1·24	0·72	7·20
Penarth .. .. .	..	0·0	0·59	0·07	0·07	0·07	..	0·21	0·07	0·8	1·4	0·35	0·28	4·34
Pontypridd .. .. .	..	0·1	0·22	0·17	0·09	0·03	0·36	0·84	0·19	1·2	3·2	0·72	*9·03	9·00
Porthcawl .. .. .	..	0·0	..	..	0·5	..	..	..	..	0·6	2·1	2·0	0·0	8·0
Ystradyfodwg .. .. .	..	0·1	0·26	0·26	0·09	0·009	0·12	0·27	0·25	0·8	3·5	0·83	0·80	8·1
RURAL.														
Bridgend & Cowbridge—Bridgend .. .. .	..	0·0	0·20	0·38	..	..	..	0·14	..	0·8	2·4	1·26	0·49	11·41
„ „ Cowbridge .. .. .	..	0·0	0·16	0·16	..	..	..	..	0·48	1·4	1·2	1·44	1·92	4·84
Cardiff .. .. .	..	0·0	0·42	0·35	..	..	1·105	0·70	0·05	1·07	2·5	1·60	0·85	7·05
Gower .. .. .	..	0·0	0·27	..	..	..	..	..	..	2·1	2·0	1·3	0·26	7·41
Merthyr .. .. .	..	0·2	0·06	0·06	0·06	..	..	1·5	..	0·8	3·9	..	..	..
Neath .. .. .	..	0·1	0·29	0·13	0·12	0·04	0·46	0·12	0·16	1·1	3·0	1·48	0·48	7·44
Pontardawe—East .. .. .	..	0·0	0·24	0·60	..	..	..	1·08	..	1·9	2·9	1·32	0·96	10·2
„ West .. .. .	..	0·2	..	..	..	..	..	..	..	2·5	4·7	0·45	0·90	9·10
Pontypridd .. .. .	..	0·2	0·40	0·31	..	..	0·105	0·20	0·21	0·6	2·6	1·60	0·71	7·65
Swansea—Llangyfelach .. .. .	..	0·6	0·18	0·17	0·09	..	1·33	0·72	0·09	1·6	3·0	0·99	0·36	7·75
„ Llandilo-Talybont .. .. .	..	0·1	0·20	0·13	0·07	..	0·07	0·70	0·07	1·6	3·9	1·12	0·49	11·25
Llanelly—Bor. & Par. of Loughor .. .. .	..	0·0	0·23	..	..	0·2	..	0·4	0·23	2·9	3·9	0·6	0·8	1·61
Newport—Llanfedw & Rhyd'wern .. .. .	..	0·0	..	..	..	..	..	1·8	..	0·0	1·5	..	..	3·6
Urban Districts .. .. .	0·005	0·9	0·24	0·19	0·08	0·05	0·10	0·24	0·43	0·9	3·5	‡0·9	‡1·2*	‡5·9
Rural Districts .. .. .	..	0·12	0·24	0·19	0·41	0·01	0·1	0·5	0·09	1·3	2·8	‡0·9	‡0·8	‡6·3
Administrative County .. .. .	0·005	0·101	0·24	0·19	0·25	0·03	0·11	0·31	0·33	1·1	3·15	‡0·9	‡1·04	‡6·1

\* Including the 289 deaths occasioned by the Albion Colliery disaster.

† Rates per 1,000 population are given here, not per 1,000 births as in other parts of the Report.

‡ As nearly as could be ascertained.

## ADOPTIVE ACTS.

## INFECTIOUS DISEASE (NOTIFICATION) ACT.

Was adopted during the year by the Cowbridge and Maesteg (urban) Authorities, and at the close of the year it was in operation throughout the County, except in the following five districts, representing a population of 79,530 or 14·5 per cent. of the population of the whole County :—

<i>Urban.</i>	<i>Rural.</i>
Aberdare.	Gower.
Briton Ferry.	Pontardawe.
Glyncorrwg.	

I have so frequently discussed the various arguments that can be adduced in favour of compulsory notification, and dwelt upon the undoubted advantages which have been found to accrue to a community from adopting this valuable Act, that it is needless to do so on this occasion. Besides this, special requests have been made by the Sanitary Committee of the Glamorgan County Council to those authorities which had not then adopted the Act. On this occasion I shall only quote the opinions that have been expressed in favour of the Act by the Medical Officers of those districts in which it is not in force, and as I find that the matter of cost is the only deterrent to its becoming universal in this County, it would be useful to supply the average cost per 1,000 population in a few districts where it has been in force.

Dr. Davies, Medical Officer of Health for Aberdare, expressed himself to me, as he has also done to his Authority on several occasions, strongly in favour of the Act.

Dr. Pegge, writes, "I have on many occasions urged upon the Board the advisability of adopting the Infectious Disease (Notification) Act, and I must again advise its adoption together with the Infectious Disease (Prevention) Act."

\*Dr. Hemming, Glyncorrwg, in his Annual Report for 1893, writes, "The Notification Act has not been adopted, nor has the Prevention Act. I think it advisable that they should be adopted."

Dr. Thomas, Pontardawe East, in reporting upon an epidemic of Typhoid Fever in his last annual report, writes, "The Infectious Disease (Notification) Act not being in force in the District, it would be impossible to speak accurately as to the number of cases, but over 20 cases of undoubted fever came under my own observation." In a list of the requirements of the districts he gives as one of them "the adoption of the Infectious Disease (Notification) Act."

The average cost per 1,000 of the population for the past four years in three Districts where the Act has been adopted has been £1 0s. 6d.

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\* Since writing the above, I am informed that the Act has been adopted at Glyncorrwg.

## INFECTIOUS DISEASE (PREVENTION) ACT, 1890.

The adoption of this act confers many important powers on Sanitary Authorities without much extra cost. It would be well to enumerate its most important provisions.

It empowers any Justice of the Peace acting in and for the district, upon proper cause being shown to him to order any infected person without proper lodgings to be detained in a hospital for infectious diseases until free from infection.

It gives increased power over the inspection of dairies, milk supplies, the cleansing and disinfection of premises, bedding, and public conveyances used for carrying infected corpses.

It prohibits:—

- (a) Persons ceasing to occupy infected houses without previous disinfection or giving notice to owner.
- (b) The retention for more than 48 hours of the body of any person who has died of any infectious disease elsewhere than in a public mortuary, or in a room not used at the time as a dwelling place, sleeping place, or as a workroom.
- (c) The removal of bodies of persons dying of infectious disease, except for burial.
- (d) The throwing of infectious rubbish into ashpits, and

It provides for the free temporary shelter with attendance for the members of any infected family who have been compelled to leave their dwellings for the purpose of enabling such premises to be disinfected by the local authority.

## THE PUBLIC HEALTH ACTS (AMENDMENT) ACT, 1890.

This Act empowers Local Authorities to make bye-laws with respect to—

- (a) The keeping of water-closets supplied with sufficient water for flushing.
- (b) The structure of floors, hearths and staircases, and the height of the rooms intended for human habitation.
- (c) The paving of yards and open spaces in connection with dwelling-houses.
- (d) The provision in connection with the laying out of new streets, of secondary means of access where necessary for the purpose of the removal of house refuse, and other matters.
- (e) As to prescribing the time for the removal through streets of offensive matter and as to the proper construction and covering of the vessels or carts employed.

It gives increased power with respect to—

- (a) The regulation of public sanitary conveniences used in common by occupants of two or more houses, or provided for factories or workshops.
- (b) Articles of food and slaughter-houses.

*All* articles of food may be seized and condemned, or condemned before seizure.

The occupier of a registered slaughter-house convicted for the sale of meat unfit for food, is liable to have his licence revoked.

It prohibits—

- (a) Rooms over privies, cesspools, ashpits, &c., to be used as dwelling or sleeping rooms.
- (b) The erection of new buildings on ground filled with offensive matters.

Part iii. of this Act was adopted during the year in the Caerphilly and Ystradyfodwg Urban Districts, and in the Bridgend and Cowbridge Rural Districts.



## ISOLATION HOSPITALS AND DISINFECTION.

I have so recently made a special report on the existing isolation accommodation in the Administrative County, and on the provisions that should be made for establishing additional hospitals, that it is unnecessary to deal with them in this Report.

With a view of ascertaining the exact position of each district in respect of Disinfection, a letter of enquiry was sent out to each Medical Officer of Health asking for information under the following heads :—

- (1) Describe briefly how disinfection of dwellings, articles of bedding and clothing are carried out in your district.
- (2) By whom is this duty performed, and after what diseases ?
- (3) Have you a disinfecting apparatus. If so, of what description ?
- (4) What disinfectants are used, and are they supplied gratuitously ?
- (5) Do you consider the existing arrangements satisfactory and sufficient ?
- (6) Suggestions.

The replies are given verbatim as received from all the districts with the exception of Porthcawl and Llangyfelach.

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases ?	3 Have you a disinfecting apparatus ? If so, of what description ?	4 What disinfectants are used, and are they supplied gratuitously ?	5 Do you consider the existing arrangements satisfactory and sufficient ?	6 Suggestions.
ABERAVON	<p><i>Dwellings.</i>—By fumigation with sulphurous acid gas, scrubbing, and white-washing.</p> <p><i>Bedding.</i>--By fumigation, renewing coverings, and in bad cases burning.</p> <p><i>Clothing.</i>--In bad cases, destruction. In others, fumigation and boiling and soaking in disinfectants.</p>	By the Inspector of Nuisances in cases of Scarletina, Smallpox, and the more grave infectious diseases. By friends in the case of Measles, which is not notifiable here.	No.	Gratuitous supply, if desired by people. Carbolic Acid Liquid, Powder & Oil. Condy's Fluid, Sulphate of Iron, Chloride of Lime.	No.	Disinfecting apparatus required.



DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
COWERIDGE ..	When disinfection is done, it is by means of sulphur cakes burnt in the rooms.	By Inspector of Nuisances. Not often done, but would be done after Small pox or Typhoid Fever.	We have no disinfecting apparatus.	Chloride of Lime. Carbolic Acid, or Condy's Fluid.	No.	A disinfecting apparatus would be useful.
NEATH ..	All wall paper stripped off and washed down with carbolic fluid, and all rooms fumigated with sulphur. Bedding and clothing are placed in a Fraser's disinfecting apparatus. In the case of smallpox, bedding is destroyed by burning.	The Medical Officer and his Assistant. Smallpox, Malignant Scarlet Fever, and severe cases of Diphtheria.	Fraser's Sulphur Apparatus.	Jeyes' Carbolic Powder and Fluid. Sanitas, Port Tennant Powder and Fluid. Supplied gratuitously to the poor classes.	Yes, but a steam disinfecting apparatus would be better.	
ABERDARE ..	Dwellings are disinfected by cleansing and lime washing, and by sprinkling Sanitas powder and fumigation. Bedding and clothing by fumigation and in some cases they are destroyed.	The Inspector of Nuisances in Smallpox, Typhoid and Scarlet Fevers, Diphtheria and Croup, and Erysipelas.	No. The one we had did not give satisfaction and was returned to the makers.	Sanitas Powder and Oil are supplied gratis.	It has answered the purpose so far.	

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions
BARRY AND CADOXTON	Generally Sulphur Dioxide and washing with Carbolic Acid solutions. In Typhus and Smallpox, walls scraped and washed with corrosive sublimate and fresh limed in addition. Bedding and clothing placed in gas-heated disinfecting chamber, except in Variola and Typhus, or suspected Cholera case, when anything burnable is burnt.	By Inspector of Nuisances in all infected cases that are notifiable in the district.	Yes. Gas disinfecting chamber (Teales). Heat used, 240 F.	Yes. (Corrosive sublimate, used by Officials only). Carbolic Powder, Sanitas, Jeyes' Soap & Fluid, Sulphate of Iron, Carbolic Oil in Scarlet Fever. All supplied freely and gratuitously.	In all except the disinfecting chamber, in the place of which we require a super-heated steam disinfectant.	Disinfection in Scarlet Fever is not satisfactory. The mother attending the patient carries infection through the whole house, however careful she is. The case must either be taken to infectious Diseases Hospital in early stage, or the whole house, and the clothing of everyone living in the house, must be thoroughly disinfected.
BRIDGEND— URBAN AND RURAL.	Washing walls, &c., with Local Government Board solution. Burning sulphur, white liming, and open windows. <i>Clothing.</i> —By immersion in Local Government Board solution and hanging out in the open air.	By the Surveyor in some cases of Enteric Fever, but he has no time to do so in all cases.	No.	Sublimate solution, chloride of lime, and carbolic acid. Yes.	Unsatisfactory.	High temperature steam disinfectant, with man to attend to it, who could also see to the proper and regular disinfection of houses.
BRITON FERRY.	Houses are disinfected with sulphur, carbolic acid, &c. Bedding and clothing are destroyed by fire.	By the Sanitary Inspector or under his supervision after Smallpox, Diphtheria, Scarlet Fever, and Typhoid.	No.	Sulphur and carbolic acid. They are supplied gratuitously.	Yes.	

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
CAERPHILLY.	<p>Fumigation by means of compressed sulphur dioxide gas. By sprinkling Jeyes' solution about rooms and Calvert's disinfecting powder.</p> <p>The articles of bedding are sometimes burnt; otherwise, washed in plenty of water after being steeped in solution of carbolic acid.</p>	<p>Sometimes by the Sanitary Authority; otherwise, by the people themselves; most frequently the latter after Scarlet Fever, Smallpox, and Typhoid.</p>	No.	<p>Jeyes' solution and Calvert's powder. In most cases yes. But persons able to pay obtain them themselves.</p>	<p>Fairly so, in cases where the inspector sees to the disinfecting they are much more satisfactory.</p>	<p>A public disinfecting apparatus would be much more satisfactory, as then no articles of wearing apparel would be used until they had been thoroughly disinfected. Now, it is to be feared, much carelessness is shown in these cases.</p>
GARW AND OGMORE.	<p>By burning sulphur candles in the room and by burning bedding in bad cases.</p>	<p>Inspector of Nuisance. Scarlet Fever, Puerperal, Erysipelas, and Septicemia.</p>	No.	<p>Carbolic acid, Condy's fluid, sulphur. Yes.</p>	No.	<p>Moveable machine for going from house to house with apparatus fixed in it, so that disinfection could be carried out with the least inconvenience to the public.</p>
GLYNCORRWG.	<p>Sulphur fumigation.</p>	<p>Self, in Scarlet Fever. Have not had need for other disease.</p>	No.	<p>Chloride of lime, sulphur.</p>	<p>Very difficult to do it in the small houses.</p>	<p>Some sort of portable apparatus which would hold things such as clothes, &amp;c., if not a shed in each village.</p>

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
MAESTEG.	I have only had a few infectious cases since I was appointed. After Scarletina and Enteric Fever the floors were well washed. Bed clothing are ordered to be placed in boiling water.	By the occupiers of infected houses. Scarlet Fever and Enteric Fever.	No.	Carbolic acid, chloride of lime, Condy's fluid supplied gratuitously by the Council.	No.	Disinfectants should be kept in convenient stations through the town, and disinfection should be carried out under the supervision of Inspector or Assistant Inspector of Nuisances.
MARGAM.	Fumigation with sulphur and boiling.	By Inspector. Smallpox, Diphtheria, Typhoid, and Scarlet Fever.	No.	Carbolic acid, powder, chloride of lime, or sulphurous acid gas supplied free.	No.	Disinfecting apparatus and Isolation Hospital urgently required.
MERTHYR.	By disinfection by burning sulphur therein. White-washing walls and cleansing floors.	Under the supervision of Inspector of Nuisances.	In stoves—dry air; erected 30 years ago.	Preparations of carbolic acid, Jeyes' perfect purifier. Free.	Yes.	
MOUNTAIN ASH.	Instruction is given in Puerperal Fever, Diphtheria, Scarlet Fever, to burn all articles soiled. Everything in room to be washed with carbolic; to paper or lime walls after cleansing. Sulphur burnt in the room. In Typhoid all motion to be buried with lime.	Sanitary Inspector gives instruction from me, and in one case the Authority took bed and bedding and burnt them.	No.	Carbolic powder and acid. Yes, if people are poor.	No.	That printed notices be left or sent to any house where there may be any infectious disease, with instruction how best to disinfect.



DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
OYSTERMOUTH ..	Chiefly by Sulphur fumigation—1 lb. of roll Sulphur to every 1,000 cubic feet, ignited in an iron vessel with the help of a little alcohol. Clothing, &c., to be suspended in room. Sometimes bed and bedding and clothing sent to the disinfecting chamber in Swansea.	By householder or by official of board after all diseases named in the Infectious Disease (Notification) Act.	No, but the Swansea Authority allow us to use its disinfecting apparatus on giving notice, and on payment.	Sulphur and Rowan's Disinfecting Fluid. To the needy they are supplied gratuitously.	No.	In all cases the disinfection should be carried out by one of the staff of the Board, and at the expense of the Board. A disinfecting chamber for the district would be beneficial.
PENARTH ..	By fumigation with burning Sulphur.	The Inspector of Nuisances. Scarlet Fever, Diphtheria, Typhoid, Smallpox, if it occurs, and sometimes after Measles.	No.	Jeyes' Fluid and Chloride of Lime. Yes.	Certainly not.	The erection and fitting up of a proper disinfecting apparatus, with van for conveyance of infected articles.
PONTYPRIDD ..	Bedrooms, bedding and clothing by Sulphur fumigation. Clothing also by immersion in boiling water containing disinfectants. Soiled beds are burnt and disinfectants freely used about an infected premises.	By Sanitary Inspectors (Certificated). Smallpox, Scarletina, Typhoid, Puerperal Fever and Diphtheria.	No.	Sulphur, Chloride of Lime, Commercial Carbolic Acid, Carbolic Powder, Sanitas Oil, Condy's Fluid, Corrosive Sublimite (Tabloids), L.G.B.	No.	A disinfecting chamber is needed, and also a properly constructed conveyance for removing and carrying infected material to and from such chamber.



DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
YSTRADYFODWG.	Parts of dwelling, such as bedrooms, are disinfected with $\text{SO}_2$ . In a few instances complete disinfection of the house is carried out by the above process of fumigation. After Smallpox and Diphtheria all bedding is disinfected by dry heat, and cases of Typhoid are similarly treated. Articles of clothing are soaked in strong Sol. of Perchloride of Mercury. Scarlatina similarly treated until they get too numerous to cope with.	Under supervision of Sanitary Inspector.	Fraser's Dry Heat Portable Disinfecting Apparatus. Disinfection carried out after the diseases before mentioned.	Soloids of Perchloride of Mercury, Sulphur Dioxide Fumigation, Eucalyptus Oil, Sanitas, Sanitas Oil and Powder, Manganate of Soda mixed with Sulphuric Acid. Chloride of Lime and Carbolic Acid, No. 4, and Crude, supplied gratuitously.		
COWBRIDGE DIVISION OF COWBRIDGE AND BRIDGEND UNION.	Dwellings, bedding and clothing are generally disinfected by the householder, by sprinkling a little Carbolic Powder about his house, rooms and drains, and in some cases burning Sulphur in the infected room. In cases of Puerperal Fever the bedding is	By the householder. Typhoid, Diphtheria, Scarlet Fever, Puerperal Fever.	No.	Carbolic Acid, Chloride of Lime, Sulphur.	Most unsatisfactory and insufficient, and in most cases more or less an useless farce.	<i>Vide</i> my Annual Reports in which I have gone into the matter most minutely and accurately. The Board, as I have pointed out every year since I held office, should procure a proper portable disinfecting apparatus. Their Inspector should personally see to the

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what disease?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
	generally destroyed, in Typhoid it is rarely destroyed.					disinfection of every infected house, drain and privy, as also to the disinfection of clothes and other infected articles. Disinfection should in every case be carried out at the expense of the Authority, as well as by their officers. Printed Leaflets relating to infectious disease and the chemicals required, and the method of using them, as I have often described to the Board, should be procured and adopted by them, instead of my recommendations on the subject in the majority of cases being ignored. The Board should also prosecute offenders in cases where infected persons are publicly exposed, or disinfection not properly carried out as I have often asked them to do, but which has never yet been done.

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
CARDIFF RURAL.	Fumigation by Sulphur of rooms--articles laid out; soaking all possible articles in Carbolic Solution, and washing the furniture in Carbolic Solution.	Chief Inspector or his Assistant, after all infectious diseases, including Whooping Cough and Measles.	No.	At present Carbolic Powder.	Not quite, but it is attended with very great success. Seldom second outbreak, probably not more than would be when case nursed at home.	Disinfectors wanted.
GOWER.	By fumigation of rooms and clothing.	Sometimes by the Inspector, chiefly by tenants, under the direction of M.O.H. Diphtheria, scarlatina, and typhoid.	No.	Sulphur and Jeyes' Fluid. They can be had gratuitously.	Yes.	
NEATH RURAL.	Bedding burnt, clothing disinfected by apparatus.	Inspector, chiefly after smallpox.	We have no disinfecting apparatus, but borrow one from the Urban Authority when required.	Chloride of Lime, Jeyes' Fluid, Sunitas, and sometimes Hydrargyri Perchloride.	I think so.	I cannot suggest anything else, as we can always borrow from the Urban Sanitary Authority their apparatus for disinfecting purposes.
PONTARDAWE - EAST.	<i>Dwellings.</i> —By burning sulphur. <i>Bedding</i> and clothing destroyed and compensated for.	Sub-inspector of Nuisances. Typhoid and scarlet fever.	No.	Sulphur, Chloride of Lime, Carbolic Acid, Sunitas, Condy's, Jeyes', &c., supplied gratuitously, and kept in depôts in different parts of the district.	Yes, fairly so.	In the event of an outbreak of Cholera, a disinfecting apparatus for bedding and clothing would be very desirable.

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
PONTARDAWE— WEST.	All articles of bedding and clothing are exposed in the room where the patient has been isolated, and a tin (according to the size of room) of sulphur dioxide condensed into a liquid is opened and the fumes therefrom allowed to evaporate and permeate the whole. The following day windows are thrown open and clothes that can be are washed in a solution of Condy's Fluid. If the room be papered all is torn off the wall and burnt. The floor and all the woodwork in the room is well washed with a solution of corrosive sublimate. In the case of small-pox I have insisted on all the clothing being burnt by the aid of paraffin, &c., in the open air.	By the Inspector of Nuisances and myself in all the Zymotic diseases.	No.	Sulphur, Sulphur Dioxide, Carbolic Powder. Yes.	Yes.	



DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases?	3 Have you a disinfecting apparatus? If so, of what description?	4 What disinfectants are used, and are they supplied gratuitously?	5 Do you consider the existing arrangements satisfactory and sufficient?	6 Suggestions.
LLANTRISANT AND LLANTWIT FARDRE.	As in the following (2).	Under the direction of the M.O.H., by the Sanitary Inspector. Scarlet Fever, Typhoid, Puerperal Fever, Measles, Erysipelas—any dangerous infectious diseases.	No.	Various: Chloride of lime, perchloride of mercury, and carbolic supplied gratuitously. Sometimes, when it can be done, burning sulphur with closed doors and subsequently white washing with lime. Clothing boiled, and occasionally, in some cases, though rarely, destroyed.	No.	I think there should be a suitable building or hospital provided for the treatment and isolation of such infectious diseases, though without compulsory powers perhaps it would be difficult to get patients to enter it unless the very poorest. There should be, in connection with it, a disinfecting chamber.
LLANDILO- TALYBONT AND LOUGHOR.	The dwellings are disinfected after disease by Sulphurous Acid or Chlorine Gas, produced by the ordinary methods. In cases of Enteric Fever the excreta are disinfected with Condy's Fluid, and the drains with Mc Dougall's Powders and Rowan's Fluid. In cases of Scarlet Fever Carbolic Oil (1-15) is used for inunction during the peeling stage. Carbolic Powders of various	By Inspector of Nuisances after all infectious diseases.	No.	Sulphur rolls or candles, chloride of lime, corrosive sublimate, carbolic oil, Condy's fluid, Rowan's fluid, Rowan's powder, Mc Dougall's powder, Calvert's powder, all supplied gratuitously.	No. The Inspector of Nuisances has so many duties devolving upon him that I fear disinfection is carried out in a very perfunctory fashion.	A disinfecting apparatus ought to be provided for the treatment of bedding and clothing, and during epidemics the Inspector ought to have an assistant to superintend the process of disinfection.

DISTRICT.	1 Describe briefly how disinfection of dwellings, articles of bedding and clothing is carried out in your district.	2 By whom is this duty performed, and after what diseases ?	3 Have you a disinfecting apparatus ? If so, of what description ?	4 What disinfectants are used, and are they supplied gratuitously ?	5 Do you consider the existing arrangements satisfactory and sufficient ?	6 Suggestions.
	<p>kinds are strewn about the premises. Corrosive sublimate is used for drains and excreta in some cases. In regard to bedding and clothing we have no disinfecting apparatus. But in the case of Smallpox, we send bedding and clothing to be disinfected at Swansea Hospital. We have no facilities for disinfecting bedding, &amp;c., but we fumigate all, and advise people to boil all that will stand washing.</p>					

### WATER SUPPLY.

Great attention has been paid during the year to defective water supplies, and the following improvements are reported to have been effected :—

<i>Sanitary District.</i>	<i>Improvements effected.</i>
BARRY ..	.. The purchase of the gas and water undertakings.
CAERPHILLY ..	.. Extension at Nelson, and the Pontypridd Waterworks mains have been extended to Taff's Well Ward.
GLYNCORRWG ..	.. Extensions at Cymmer and Abergwynfi.
MAESTEG ..	.. Part of Caerau District supplied.
MARGAM ..	.. Considerable extension in the water supply of Port Talbot, and also provisions for the new supply for the districts of Bryn, Penhyddwaelod, and Ynysygwas, were at the end of the year being carried out at a cost of over £1,200, for which a loan has been sanctioned by the Local Government Board.

<i>District.</i>	<i>Improvements effected.</i>
MERTHYR ..	.. Extended to Quaker's Yard District.
MOUNTAIN ASH ..	.. Extended to Aberdare Junction.
OYSTERMOUTH ..	.. Main laid to part of Norton.
YSTRADYFODWG ..	.. An additional storage reservoir with a capacity of 8 million gallons, has been provided.
COWBRIDGE RURAL ..	.. Several wells protected.
CARDIFF RURAL ..	.. Extensions at St. Andrew's, Whitchurch, Llandaff, Llanishen and Pentyrch.
MERTHYR ..	.. Extension at Bodlinog and Gelligear. New storage tank at Fochriw.
PONTARDAWE WEST ..	.. Extensions at Trebanws and Brecon Road, Pontardawe.
LLANTRISANT ..	.. The supply of Miskin Village and Loftus Terrace, and extension at Cross Inn.
SWANSEA, LLANGYFELACH DIV.	New storage tank and extension of water main, and erection of public fountain at Bwllfa. Extension of main to Forest Tinplate Works, Llansamlet.
SWANSEA, LLANDILO-TALYBONT	Supply provided for Penyrheol, Dynvant, Killay, Garnlas, Tycosh, Brynnewydd, Mynyddbachyglo, Ystrad Road, Pontllwytha, Forestfach, and St. Peter's Road, Cockett. Extension at Heolfelin, Cwmdu Foundry, and a new public well at Waengron.

Typhoid Fever was attributed to the drinking of polluted waters by the Medical Officers of Health for Cowbridge, Neath, Caerphilly (Taff's Well), Oystermouth, Cowbridge Rural (Llanblethian), Cardiff Rural, Pontardawe East, Llangyfelach, Llandilo-Talybont, and the Borough and Parish of Loughor.

Without an adequate supply of water cleanliness of person, clothes, house and household utensils is impossible. It should always be supplied on the constant system, but such is not the case in several districts such as Pontypridd, Ystradyfodwg, and others during the summer months and periods of drought, &c., and if there are leakages in the pipes the insuction of sewage matter is probable.

The subjoined list furnishes the names of localities where mention is made of the supply being inadequate.

<i>District.</i>	<i>Portions inadequately supplied.</i>
ABERAVON ..	.. Felindre and Sandfields.
COWBRIDGE ..	.. Whole town.
BRIDGEND ..	.. Cowbridge Road.
BRITON FERRY ..	.. Giant's Grave.
CAERPHILLY ..	.. Caerphilly, Aber, Pwllypant and Llanbradach.
GLYNCORRWG ..	.. Blaengwynfi.
MAESTEG ..	.. Several localities.
MARGAM ..	.. Penybont and Mynyddbychan.
MERTHYR ..	.. Pengarnddu.
OYSTERMOUTH ..	.. Part of Norton and George Bank.
PONTYPRIDD ..	.. Whole district
PORTHCAWL ..	.. Whole district.
YSTRADYFODWG ..	.. Whole district.
BRIDGEND RURAL ..	.. Coity, St. Bride's Major, Southerndown, Penycloed, Aberkenfig, Tondy, and Kenfig Hill.

<i>District.</i>	<i>Portions inadequately supplied.</i>
COWBRIDGE RURAL	.. Several villages.
CARDIFF RURAL	.. Lower Pentyrch, Van, Bonvilstone, Caerau. Llanbetherry. Llancadle, Rudry, Peterstone-super-Ely, Porthkerry, Tynyrodyn (Wenvoe), and Sully.
GOWER ..	.. Penclawdd.
NEATH RURAL ..	.. Skewen, Cadoxton, Cilfrew, Crynant, Seven Sisters, and Aberdulais. Some of these have since been supplied.
MERTHYR RURAL	.. Hengoed and Gilfach.
PONTARDAWE EAST	.. Cwmtwrch, Godrergrais, Alltygrais Road, and Penrhiw Fawr.
PONTARDAWE WEST	.. Portions of Alltwen and Pheasant's Bush.
LLANTRISANT ..	.. Llantwit Fardre, Llantrisant, Tonyrefail and Gilfach Goch.
LLANGYFELACH DIVISION	.. Parish of Llansamlet Lower.
LLANDILO-TALYBONT	.. Gorseinon, Pontardulais and other places.

## SEWERAGE AND SEWAGE DISPOSAL.

Works of sewerage and drainage have been carried forward in many parts of the County during 1894, *e.g.* at —

<i>District.</i>	<i>Improvements effected.</i>
ABERAVAN ..	.. A main sewer for Sandfields.
BARRY ..	.. The outfall sewer has been completed.
GLYNCORRWG ..	.. Slop and surface water drains at Abergwynfi.
MAESTEG ..	.. Sewer extension in five streets.
MARGAM ..	.. 500 yards of 12in. sewers.
MERTHYR ..	.. The sewerage of Quaker's Yard District.
MOUNTAIN ASH	.. Extension of sewers in several localities.
PENARTH ..	.. Extension of the Kymin sewer to low water mark.
PONTYPRIDD ..	.. Great progress is reported to have been made in house drainage and subsidiary sewers, and most of the houses are now connected. The length of the subsidiary sewer now completed is 32 miles, at a cost up to date, of £28,000.
PORHCRAWL ..	.. Extension of sewer opening on beach to below low water mark.
YSTRADYFODWG	.. The following places are practically connected with main sewer, viz.— Hafod, Britannia, Porth, Cymmer, Penygrais, Clydach Vale, Llwynpia, Gelli, Ynyshir, and part of Ystrad, Treorky, Treherbert, Cwmpark, Ferndale, Mardy, and Tylorstown. Sewers for Pontygwaith, Wattstown, Ferndale, and Pentre are to be proceeded with immediately.
BRIDGEND (Rural)	.. Sewerage of Brynna, and extension of main sewer at Llantwit-Major.
CARDIFF (Rural)	.. Extension at Ely, Pontcauna, Tongwynlais, and Whitechurch.
GOWER ..	.. Drainage of stagnant pools at Merton.
MERTHYR (Rural)	.. Sewerage of Bedlinog completed.
LLANTRISANT ..	.. Sewerage of Gilfach Goch and Tonyrefail are now going on.
LLANDILO-TALYBONT	.. New drains for Bryn Terrace and portion of Lime Street, Gorseinon.



Systems of sewerage are urgently required for various villages of the Caerphilly District, Cowbridge (Borough), Bridgend, Bridgend Rural (including Brynmenyn, Tondy and Aberkenfig), Garw Valley, Maesteg, Glyncoed and Abergwynfi, Aberdare Junction, Porthcawl, and in the various towns and villages in the Bridgend and Cowbridge, Cardiff, Gower, Neath, Pontardawe, Llantrisant and Llantwit Fardre, and Swansea, Rural Districts. Several are now in course of construction, *e.g.* those of Llantrisant, Tonyrefail, Gilfach Goch, and those of the Caerphilly District, including Nelson, Pwllpant, Llanbradach and Senghennydd, will shortly be undertaken, while those of the Bridgend Valleys, including Garw, Brynmenyn, Tondy, Aberkenfig and Bridgend, together with those of the Avan Valley, including Aber and Blaengwynfi, Glyncoed, Cwmavon and a part of Aberavon, as well as those of the various villages in the Neath rural districts, those of Gorseinion and Pontardulais, are *in statu quo*, and occasionally talked about.

### DAIRIES, COWSHEDS AND MILKSHOPS.

It is not long since I presented a special report dealing with the sanitary supervision of dairies, cowsheds, and milkshops as it is, and should be, carried out. On the present occasion I shall confine myself to the few remarks which appear in the local reports. In several reports there appears nothing about them beyond the general statement that they are frequently inspected and found satisfactory, and I notice that this appears year after year in some of the reports, whereas from personal inspection I know that such is not the case. At Barry there are 31 registered milksellers, their premises are frequently inspected and the occupiers are required to comply with the provisions of the order. A considerable change for the better in their condition is reported. In Aberdare, Bridgend Urban, Porthcawl, and Swansea Rural districts, no regulations have been made under the Order. The Sanitary Inspector of Margam, who has presented an excellent report on the work done by him, writes that he has paid during the year special attention to dairies, cowsheds, and milkshops, with the result that 33 inspections were made and 10 nuisances, arising principally from the want of cleansing and limewashing, were found to exist. Notices for their abatement were served, and all complied with. He reports that the greatest number of cowsheds in his district were of the most primitive condition, and that their principal defects were:—

- (1) Want of proper amount of cubic space for each animal kept.
- (2) Means for proper lighting and ventilation.
- (3) Bad construction of floors.
- (4) The almost universal practice of storing fodder, intended to be used as food for cattle, on stages over them.

Eighty-one inspections were made, 19 notices served, and 2 cowsheds were re-built, and in 2 others structural defects were remedied. 15 nuisances arising from various causes were abated. I only wish all the other Inspectors would do likewise; for what is more desirable than healthy cowsheds, and clean dairies and milkshops?

From Caerphilly it is reported that these premises are not under any supervision at the hands of the authority. Full particulars are given by Dr. Bevan, of Oystermouth, of the dairies, cowsheds and milkshops in his district, and he calls special attention to the importance of their registration and supervision, and he reports that some of them require to be much improved before they would meet the requirements of the Dairies, Cowsheds and Milkshops Order.

I consider the remarks of Dr. Dyke, under the headings of "Milk and Cowsheds," so important that I cannot do better, and at the same time do him justice, than by quoting them: "Alas, there is again another peril to be guarded against. The *milk of a tuberculous cow* taken as food by a suckling child can, and, alas, often does deposit in the system of the infant (the darling of its parents) seeds of this most destructive malady, for the milk so drawn from a diseased animal contains the germs of the malady in a most readily absorbed form. The infant takes its milk (only half-boiled, mind, thorough boiling for ten minutes would kill the germ), does not thrive, becomes

thin, except the belly, which becomes large and lumpy to the feel, and gradually wastes away. Now, does it occur to the public that the cows used for the provision of milk should be certified by a skilled veterinary surgeon to be free from tubercle? You will answer, no, and rightly, for until recently we had no means of testing; it has, however, been shown that by vaccinating a cow in milk with tuberculin that the healthiness, or otherwise, of the animal may be proved. Is it possible to hope that this may be done? Lastly, I would ask you and every reasonable man to consider whether animals, kept as milch cows in this town are, can be expected to give good sound milk. Observe the filth of the yard surrounding the cowshed; penetrate, if you are bold enough, into the shed; observe the *litter* on the floor, the hay bespattered—all things the reverse of that cleanliness which those who drink the milk think (fond thought) should surround the food they use. Can you correct this? I believe you can. Under the Dairies and Cowsheds Act you have the authority to regulate these places. Your predecessors have made byelaws, they have required all cowkeepers in your district to register their cow lairs. If this were done your officers might be able to effect some improvement."

### HOUSING OF THE WORKING CLASSES.

Judging from Table C and local reports, 41 houses were closed as unfit for habitation during the year, of which 12 were in urban and 29 in rural districts.

At Aberavon one house was closed, and one house was repaired at Cowbridge.

At Neath Borough insanitary dwellings are prevalent, and Dr. Thomas comments strongly upon the insanitary and unhealthy condition of Lake's Court, Jolly Court, and Saviour's Court. "Lake's Court is an exceedingly narrow one, the ground surrounding the houses is sodden with excrement and other filth, the houses are damp, and there is scarcely a pane of glass in the windows of some of them. Their interior is filthy through the want of lime washing, and the partitions between the bedrooms are mostly down. Three of the houses are simply one-room dwellings. Closets are built against two of these, and they are nearly always in a filthy condition. Notices are continually served upon the owners to have the said closets cleansed, which they comply with, but they are soon filthy again. . . . The houses in this court in their present condition are totally unfit for human habitation." "Jolly Court.—Many times during the year the houses are flooded to a depth of 18 inches, and when the water recedes the floors are covered with sewage matter. Unless this state of things be remedied soon, dangerous diseases might at any time break forth. The only remedy to my mind is the raising of the floors of the houses and land around." "Saviour's Court.—The houses in this court are in an exceedingly bad state, and the owners should be called upon either to repair or close them."

There is a great want of more house accommodation in Briton Ferry, and in many cases houses are considerably overcrowded. The troughing and drain pipes are in many cases broken or entirely gone. The condition of Giant's Grave, which at the beginning of the year was deplorable, has been vastly improved. Certain properties belonging to the Neath Canal Company, which were in a dilapidated and overcrowded condition, have been entirely remodelled, and in several cases two small houses have been thrown into one, vastly improving them, both in comfort and sanitation. Also a property of eight houses has been greatly improved and provided with new back yards and water closets.

Dr. Thomas, of Caerphilly, dealing with houses unfit for human habitation, writes, "There are several house—nine in all—which from dampness, want of through ventilation, rotten roofs and dilapidated condition of flooring, were in such a condition that I could not but advise their closing. Another which had been ordered to be closed last year, has been closed this year. This reminds me that I should have directed your attention to two cellar dwellings in Bedwas Road, Caerphilly, which were condemned about sixteen months ago, one of which is still occupied. This should be seen to without delay."

At Maesteg it is reported that there are many of the oldest houses out of repair. The Medical Officer of Health writes, "I reported in October that Nos. 1, 2 and 3 Edwards' Court, Nos. 25, 26, 27, 28, 29 and 30, Rock

Street, Nos. 53, 53½, 54, 55 and 56, Bethania Street, should be thoroughly repaired, and were unfit for human habitation in their present condition. 3, Edwards' Court has been repaired, and No. 2 has been closed, but the others are still inhabited and in the same state. Nos. 15 and 16, Rock Street were reported as having no house drains, and the closet arrangement as being very imperfect and injurious to the health of the occupants. Nothing as yet has been done. In May I condemned the cellar dwellings (one room in each cellar) in Garw Road as unfit for habitation, and advised that the brook which runs in front of the said cellars, and which contains the sewage of Alma Road, should be arched over. The cellars are still tenanted and the brook uncovered."

In Margam seven houses were condemned, and four have since been closed. Cases of overcrowding and nuisances arising from dirty houses, and the want of limewashing were found to exist in 20 cases, and were abated in a satisfactory manner after the serving of notices.

At Merthyr five houses were closed, and there are many others that ought to be closed.

In Pontypridd 24 houses were reported upon as defective in structural and sanitary arrangement. Four of these were condemned as unfit for habitation, and the remaining 20 have since been altered and rendered habitable.

Dr. James, Ystradyfodwg, reports that he does not believe there exists a single cellar dwelling within the district in accordance with the Public Health Act, and a resolution was passed to close permanently any cellar dwelling in which a case of filth fever occurred.

Dr. Meller, of Cowbridge, writes, "It certainly reflects upon the Authority that new houses are erected in districts where bye-laws are in force, of such a description, and with such a lamentable want of proper sanitary requirements as has been the case in parts of the parish of Llanharan during recent years."

This important subject of the housing of the working classes does not receive the proper attention it deserves. The surroundings of many of the houses require improvement, *e.g.* the pavement of back yards, proper gully traps, proper ashpits, and the substitution of cesspools and pits wherever possible by properly constructed receptacles with their bottoms and sides cemented. The attention of Local Authorities should be called to the power which the County Council possesses under section 45 of the Housing of the Working Classes Act, 1890, to deal with insanitary dwellings within their districts.

### OVERCROWDING.

Overcrowding is mentioned in several reports, and doubtless it occurs to a great extent in our mining districts, where the practice of subletting is common. I am informed that the same bed is occupied by different lodgers day and night, thus occasioning overcrowding and insufficient ventilation. There cannot be a more fruitful source of disease and sickness than this constant occupation of beds and bedrooms. This important matter requires more attention and interference on the part of Local Authorities.

### SCAVENGING AND DISPOSAL OF REFUSE.

Table III. at the end of this Report has a special column devoted to "Public Scavenging" which shews, as far as I have ascertained the position of each district with regard to this duty. A system of Public Scavenging has been adopted during the year in several localities by Sanitary Authorities or Contractors, amongst them being Llanbradach and Senghenydd in the Caerphilly district, and Porthcawl. This practice should be extended to many other localities already dealt with in my various quarterly reports. As I have said on a previous occasion nothing short of burning can effectually cleanse the "refuse tips" of the Rhondda and many of our narrow mining valleys. These accumulations are filthy in the extreme, are but seldom disinfected and fenced in can be smelt from a distance, and doubtless associated with the origin and spread of filth fevers.



## SLAUGHTER HOUSES.

I have visited all the slaughter houses within the County, and, some of them, many times over, and am in a position to state that their condition is very much improved. Below will be found a short summary of the remarks made respecting them in the various reports.

The Corporation slaughter house at Aberavon is unsatisfactory, and the Medical Officer is doubtful whether it should be mended or ended. He recommends concreted floors, the framing and enforcement of strict regulations, and the provision of a plentiful supply of water for flushing. There are public slaughter houses at Aberavon, Neath (Borough), Aberdare, Barry, Merthyr, Bridgend, and one recently constructed at Pontypridd. Public slaughter houses are recommended for Cowbridge, Garw and Ogmore, for the various districts of Caerphilly, Maesteg, Margam, Oystermouth, Gilfach Goch, Gorseinion, Pontardulais. The two slaughter houses at Briton Ferry have not being kept in a satisfactory condition, though of late there has been an improvement. Respecting those in the Caerphilly District, the Medical Officer is of opinion that none of them meet the requirements of the Authority's new Bye-laws. In Garw and Ogmore it is reported that they are too near dwellings to be free from danger, and are not always kept in as clean a condition as they might have been. Those at Margam were found to be in a clean and wholesome condition, and the meat deposited for, and in preparation for sale, appeared to be of good quality and in sound condition. The following are the remarks of Dr. Dyke, respecting the propagation of tubercle through the agency of diseased meat:—"As the *flesh* of animals labouring under Tubercular Disease, if eaten uncooked, may be the means of spreading the germs of tubercular disease to those who eat it, it seems to me a duty incumbent on Sanitary Authorities to ensure the public that the animals slaughtered for human food should be ascertained to be free from this malady. It is no great thing for any community of men to effect this freedom from disease of the flesh food provided by butchers. Our brethren, the Hebrews, have from ancient, very ancient times, practically ascertained the healthy condition of the flesh food they mark as "Coshir;" why should not similar care be taken by other communities, other nationalities? Why should not "Cymru Fydd" look forward to a *healthy* beefsteak?"

At Mountain Ash the slaughter houses are said to be visited and found in a satisfactory state. With one exception none of the five at Oystermouth meet the requirements of the Public Health Act. In connection with the new Abattoir recently provided at Pontypridd, the Medical Officer of Health is of opinion that the closing of the numerous old dilapidated structures, with their insanitary surroundings, formerly used for the slaughtering of cattle, and their substitution by the present fine building, has in a great measure tended to reduce the death rate, and that the new slaughter house will prove to be a blessing to the health of the community generally.

In the report of the Royal Commission on Tuberculosis, it is stated: "We have obtained ample evidence that food derived from tuberculous animals can produce tuberculosis in healthy animals. The proportion of animals contracting tuberculosis after experimental use of such food is different in one and another class of animals; both carnivora and herbivora are susceptible, and the proportion is high in pigs. In the absence of direct experiments on human subjects, we infer that man also can acquire tuberculosis by feeding upon materials derived from tuberculous food-animals."



## COMMON LODGING HOUSES.

As I have frequently remarked, the common lodging houses of this County are under the supervision of the Police Officers, and it is only in a few districts that the Sanitary Authorities make it their business to inspect them. Consequently between these two stools their sanitary condition is found to be neglected. The only reason why this important duty should be delegated to the police is that they have the chance of keeping a watch on the persons frequenting them. But might it not be so arranged that they still retain this power of entry, while their management is transferred to Sanitary Authorities.

The Medical Officer of Health for Aberavon is satisfied with the cleanliness of the common lodging houses in that borough. At Neath they are systematically inspected, and with one or two exceptions found in a very fair state. The Medical Officer writes :—"No. 1, Castle street, now used as a common lodging house, is in my opinion totally unfit for the purpose, and you should withdraw your consent to its use as such. On December 8th, I was asked to inspect No. 2, Castle street, with a view to registering it as a common lodging house, after carefully examining it I found it was totally unfit for the purpose proposed." At Barry, where the Merchant Shipping (Fishing Boats) Act, 1883, has been put in force since 1st July, 1893, there are 38 licensed seamens' lodging houses, providing accommodation for 420 persons. These were visited once each week day and night, and found in a satisfactory condition. Of the 5 common lodging houses at Bridgend some are unfit for human habitation, and notices have been served upon the owners under the "Housing of the Working Classes Act, 1890," and steps have been taken to close them. These houses are frequently overcrowded and inadequate for the district, and a good common lodging house would be a boon to the town. The common lodging house at Caerphilly, which was a disgrace to the town, has been closed.

## REPORTS OF SANITARY INSPECTORS.

Of the 32 copies of Table C sent out to Medical Officers of Health, 18 were filled up and returned. In several instances they were incompletely filled up, and in some cases not at all. From all the districts except Neath Borough, Aberdare, Briton Ferry, and Garw and Ogmores, a report of some sort or another was sent. The reports for Margam, Caerphilly, and Bridgend are most complete, and contain much useful information.

## SALE OF FOOD AND DRUGS ACT.

For the purposes of this Act the County is divided into five districts—Barry and Cadoxton, Bridgend, Merthyr, Neath, and Pontypridd—and the duties are performed by the Superintendents of the Police, acting as Inspectors under the Act. The number of samples taken by them during the year ending December 6th, 1894, was 1,141, of which 215 were taken in the first, 304 in the second, 304 in the third, and 318 in the fourth quarter, or

145	from Barry and Cadoxton District.	
172	„ Bridgend	„
317	„ Merthyr	„
207	„ Neath	„
300	„ Pontypridd	„

They may be classified as follows:—

Arrowroot .. .. .	1	Lemon Pastilles .. .. .	1
Brandy .. .. .	3	Liquorice .. .. .	5
British Sherry Wine .. .. .	1	Lozenges .. .. .	1
Baking Powder .. .. .	4	Malt Vinegar .. .. .	13
Bread .. .. .	35	Milk .. .. .	391
Butter .. .. .	94	Milk of Sulphur .. .. .	3
Cake .. .. .	20	Margarine .. .. .	2
Castor Oil .. .. .	7	Metheglen .. .. .	2
Cheese .. .. .	7	Mustard .. .. .	8
Citrate of Magnesia .. .. .	3	Oatmeal .. .. .	4
Cocoa .. .. .	1	Pepper .. .. .	62
Coffee .. .. .	51	Rice .. .. .	1
Corned Beef .. .. .	1	Rizine .. .. .	1
Cornflour .. .. .	1	Run .. .. .	3
Cream .. .. .	1	Sausages .. .. .	1
Dandelion Coffee .. .. .	1	Sago .. .. .	1
Fancy Bread .. .. .	16	Self-rising Flour .. .. .	8
Flour .. .. .	17	Senna Leaves .. .. .	2
German Yeast .. .. .	14	Sherbet .. .. .	1
Gin .. .. .	12	Sugar .. .. .	40
Ginger .. .. .	16	Soda Water .. .. .	4
Glycerine .. .. .	1	Tincture of Rhubarb .. .. .	3
Green Peas .. .. .	3	Tea .. .. .	33
Honey .. .. .	2	Vinegar .. .. .	10
Jam .. .. .	1	Whisky .. .. .	46
Lard .. .. .	148		

The local reports state that 57 samples of water were taken and analysed by order of the following Authorities:—

Caerphilly .. .. .	2	Samples .. .. .	2	Condemned
Llantrisant and Llantwit Fardre ..	13	„ .. .. .	12	„ and 1 Suspicious.
Cardiff .. .. .	20	„ .. .. .	10	„
Merthyr Rural .. .. .	2	„ .. .. .		
Neath Rural .. .. .	20	„ .. .. .	2	„

## RAINFALL.

The rainfall is closely connected with the surface features, and the contour of the ground determines in a remarkable manner its relative amount in any given locality in the County, and it is found to be very different in amount, even at points only a few miles apart. The following measurements are given in the various reports :—

## BARRY.

Taken at Biglis Pumping Station. Elevation 20 feet. Diameter of Receiver of Guage, 5 inches.

MONTH.	Total Depth.	Greatest Fall in 24 Hours.		No. of Days on which 0·0lin. or more Fell.
		Depth.	Date.	
January .. .. .	2·28	0·25	16th	23
February .. .. .	3·33	0·70	18th	18
March .. .. .	2·70	0·50	8th	14
April .. .. .	1·47	0·38	24th	12
May .. .. .	1·64	0·34	14th	12
June .. .. .	2·52	0·59	4th	15
July .. .. .	4·04	0·91	25th	17
August .. .. .	5·33	1·12	26th	20
September .. .. .	2·57	1·04	23rd	8
October .. .. .	4·40	0·96	31st	12
November .. .. .	4·70	0·98	11th	19
December .. .. .	3·87	0·67	15th	21
Totals .. .. .	38·85	..	..	191

## OYSTERMOUTH.

Taken at Newton. Elevation 280 feet.

MONTH.	Total Depth.	Greatest Fall in 24 hours.		No. of Days in which fall was 01 or more inches.
		Depth.	Date.	
January .. .. .	3·98	..	..	23
February .. .. .	3·98	..	..	20
March .. .. .	3·36	..	..	12
April .. .. .	1·97	..	..	17
May .. .. .	3·69	..	..	21
June .. .. .	3·06	..	..	16
July .. .. .	5·40	1·53	24th	24
August .. .. .	6·16	..	..	21
September .. .. .	2·30	..	..	11
October .. .. .	6·82	1·23	30th	18
November .. .. .	7·31	..	..	22
December .. .. .	4·32	..	..	27
Total .. .. .	52·35	..	..	232

## LLANDILO-TALYBONT.

Taken at Penllergaer, in the Parish of Pendery. Elevation 240 feet. Diameter of Funnel 5in.

MONTH.	Total Depth.	Greatest Fall in 24 hours.		No. of Days on which fall was 0·01 or more inches.
		Depth.	Date.	
January .. .. .	5·42	·70	10th	25
February .. .. .	4·27	·68	16th	20
March .. .. .	3·29	1·03	12th	12
April .. .. .	2·30	·38	21st	16
May .. .. .	4·70	·75	8th	16
June .. .. .	3·15	·48	3rd	17
July .. .. .	5·96	1·56	24th	24
August .. .. .	5·52	·88	1st	19
September .. .. .	1·76	·53	24th	7
October .. .. .	8·21	1·51	30th	16
November .. .. .	7·36	1·72	13th	21
December .. .. .	4·68	·54	23rd	24
Total .. .. .	56·62	..	..	217

## LLANGYFELACH.

Taken at Glanyrafon, Morriston. Elevation, 53·2 feet. Diameter of Funnel 6 inches.

MONTH.	Total Depth.	Greatest Fall in 24 hours.		No. of days in which 0·1 inches or more fell.
		Depth.	Date.	
January .. .. .	5·21	·60	9th	24
February .. .. .	4·70	·83	16th	22
March .. .. .	3·49	1·13	12th	12
April .. .. .	2·24	·33	24th	17
May .. .. .	4·05	·97	13th	17
June .. .. .	2·99	·50	3rd	18
July .. .. .	5·13	1·16	24th	22
August .. .. .	5·73	·90	25th	20
September .. .. .	1·70	·50	24th	8
October .. .. .	7·11	1·68	30th	16
November .. .. .	7·39	1·50	13th	20
December .. .. .	5·06	·74	23rd	23
Total .. .. .	54·80	..	..	219

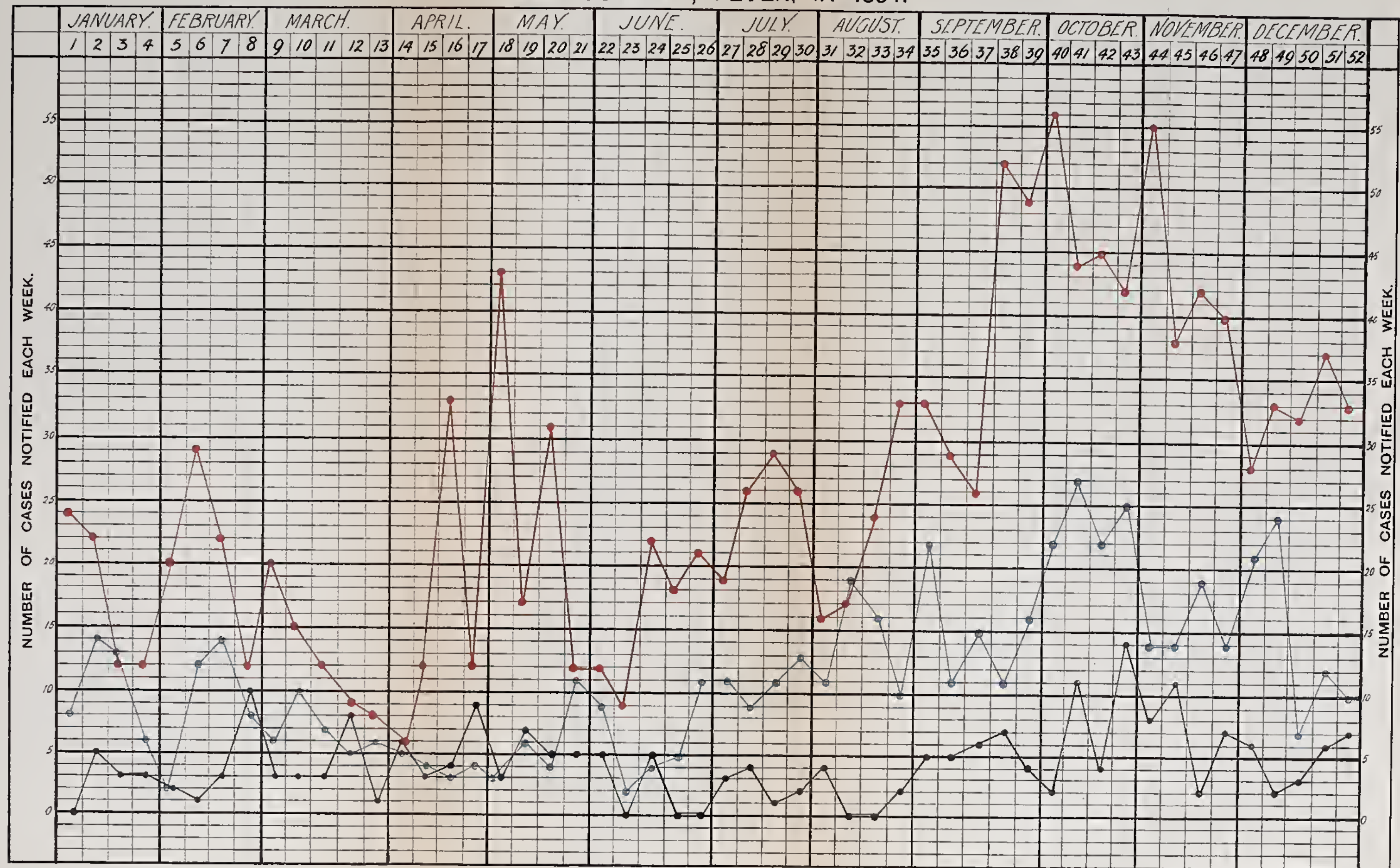


## MERTHYR.

MONTH.					Pentwyn Reservoir. Elevation 1 300 feet.	Brynteg, Merthyr. Elevation 685 feet.	Pentrebach, Merthyr. Elevation 497 feet.
January	..	..	..	..	8.59	6.66	8.23
February	..	..	..	..	9.23	4.98	5.39
March	..	..	..	..	6.45	5.03	6.2
April	..	..	..	..	3.55	4.08	4.22
May	..	..	..	..	3.68	3.38	4.24
June	..	..	..	..	3.29	2.69	2.85
July	..	..	..	..	5.88	4.41	3.83
August	..	..	..	..	4.69	4.16	4.41
September	..	..	..	..	2.42	2.12	2.22
October	..	..	..	..	8.69	7.86	8.72
November	..	..	..	..	10.22	9.05	9.98
December	..	..	..	..	6.25	4.41	4.93
Total	..	..	..	..	72.24	58.83	65.22



CHART SHEWING SEASONAL PREVALENCE OF DIPHTHERIA AND GROUP, TYPHOID  
AND SCARLET, FEVER, IN 1894.



Diphtheria and Group, thus: —

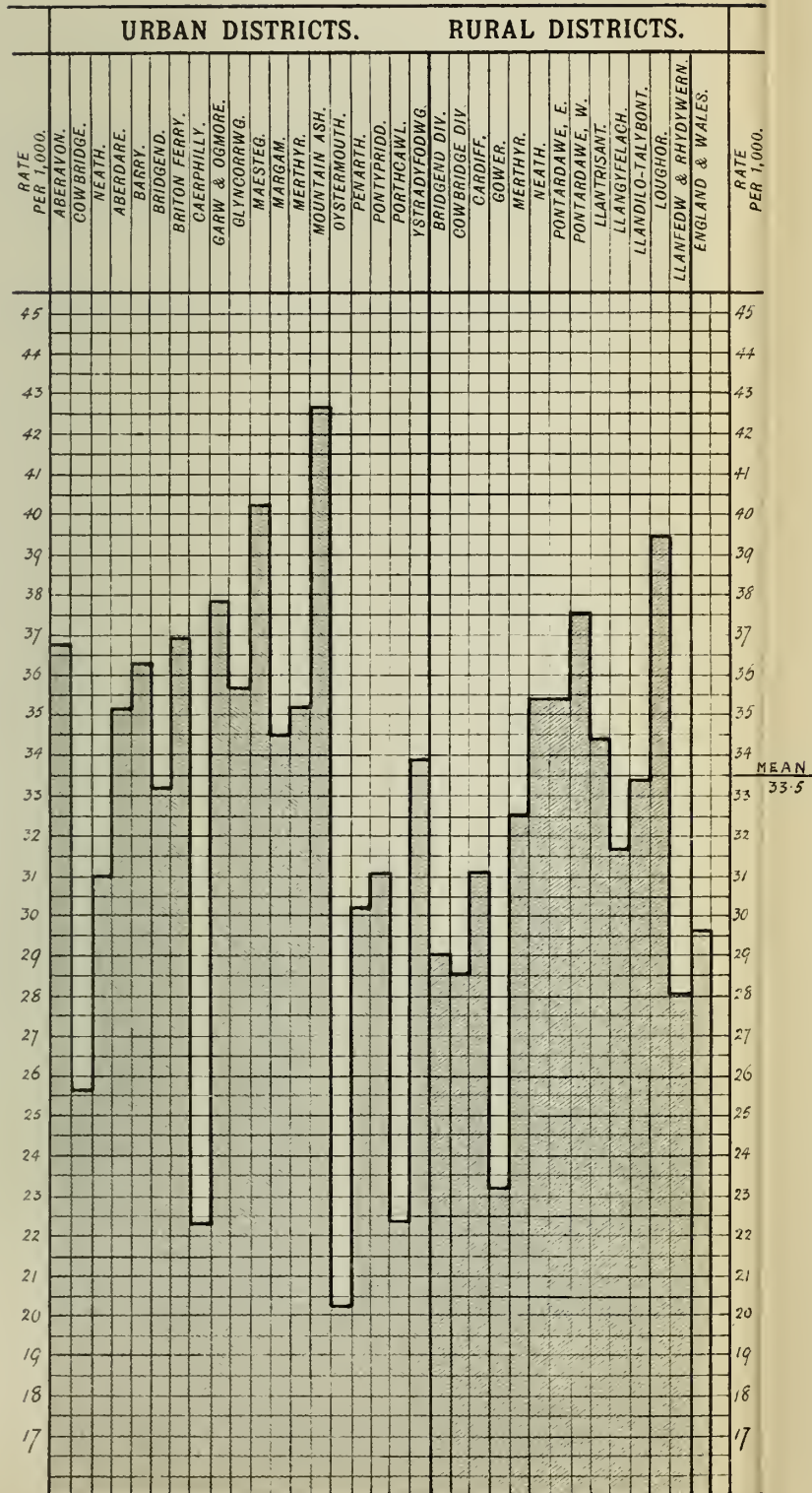
Typhoid or Enteric Fever, thus: —

Scarlet Fever, thus: —



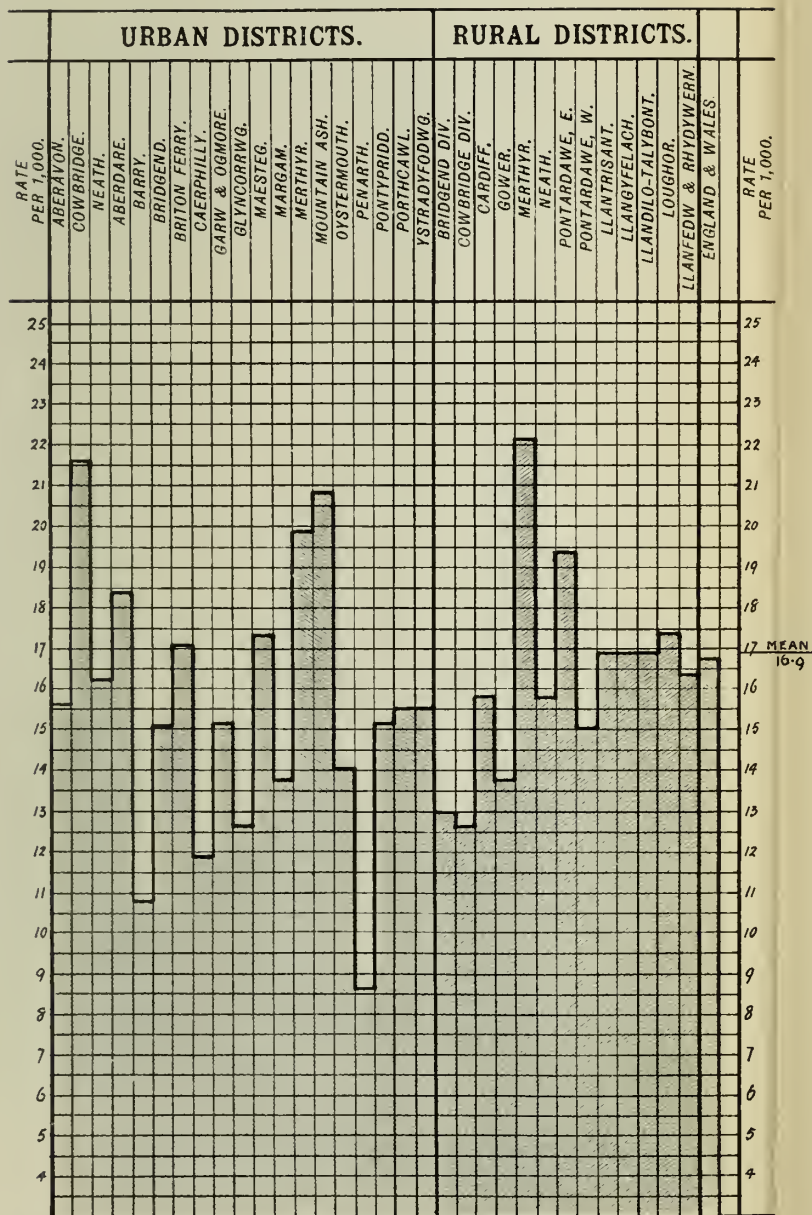


# BIRTH-RATE.





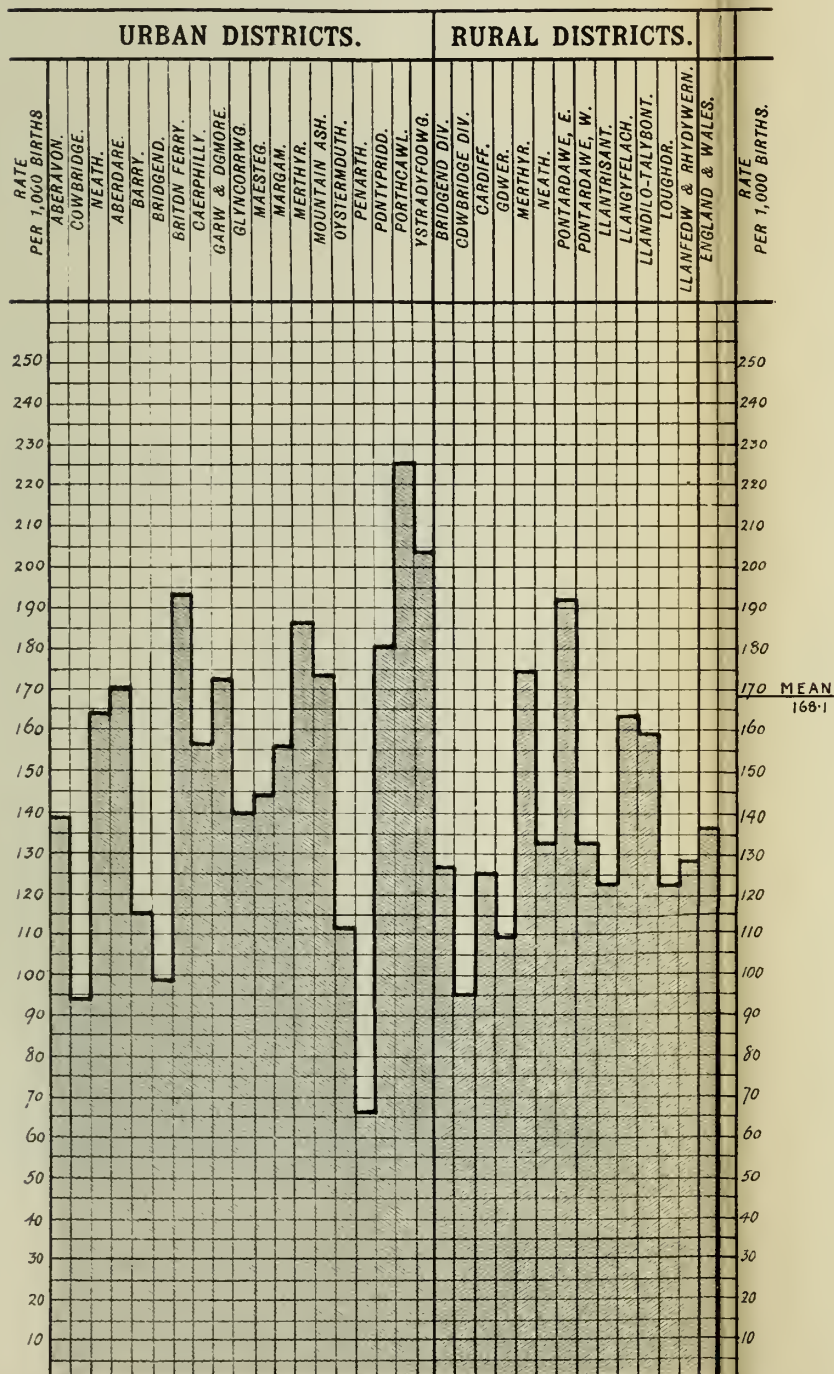
## DEATH-RATE.

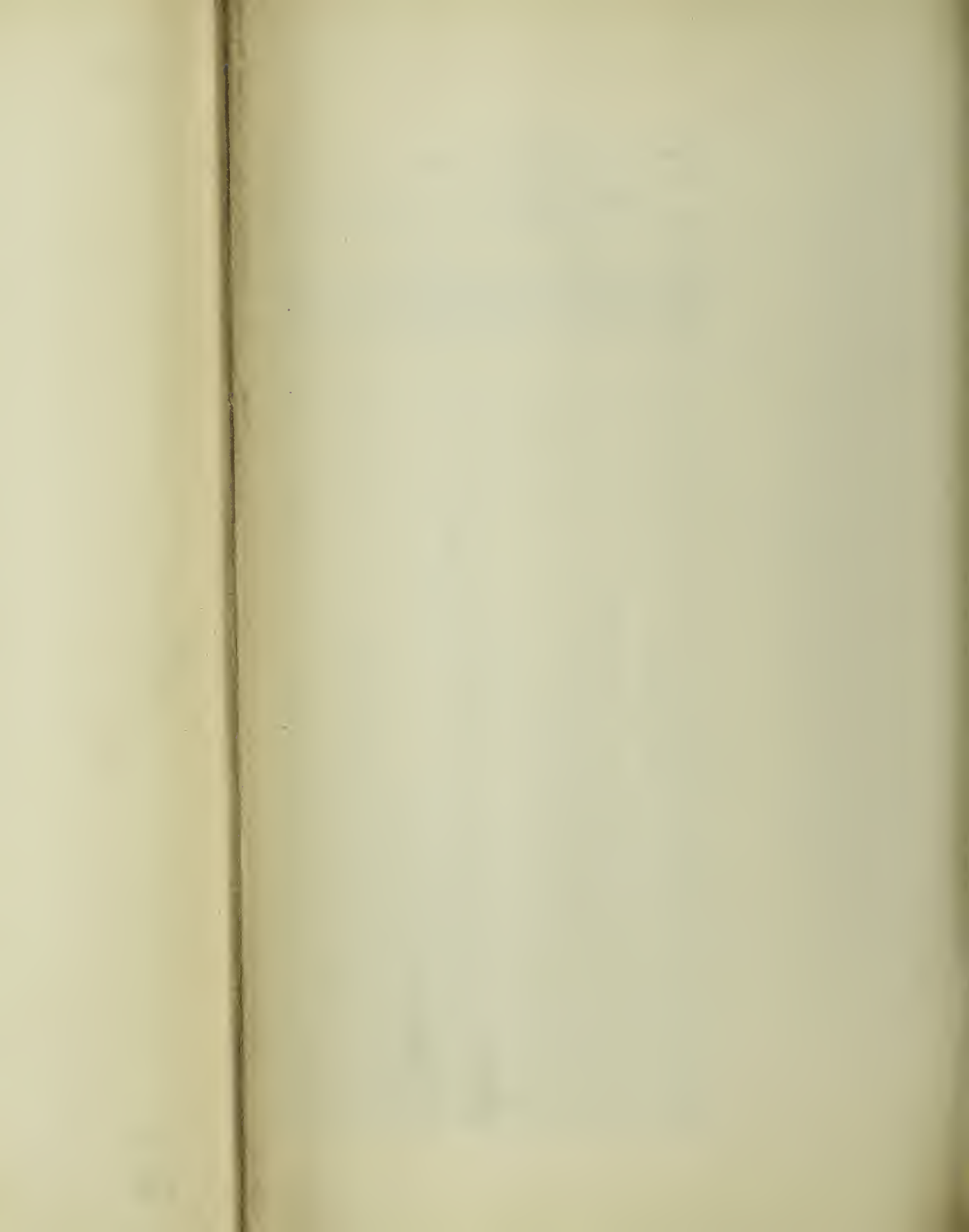




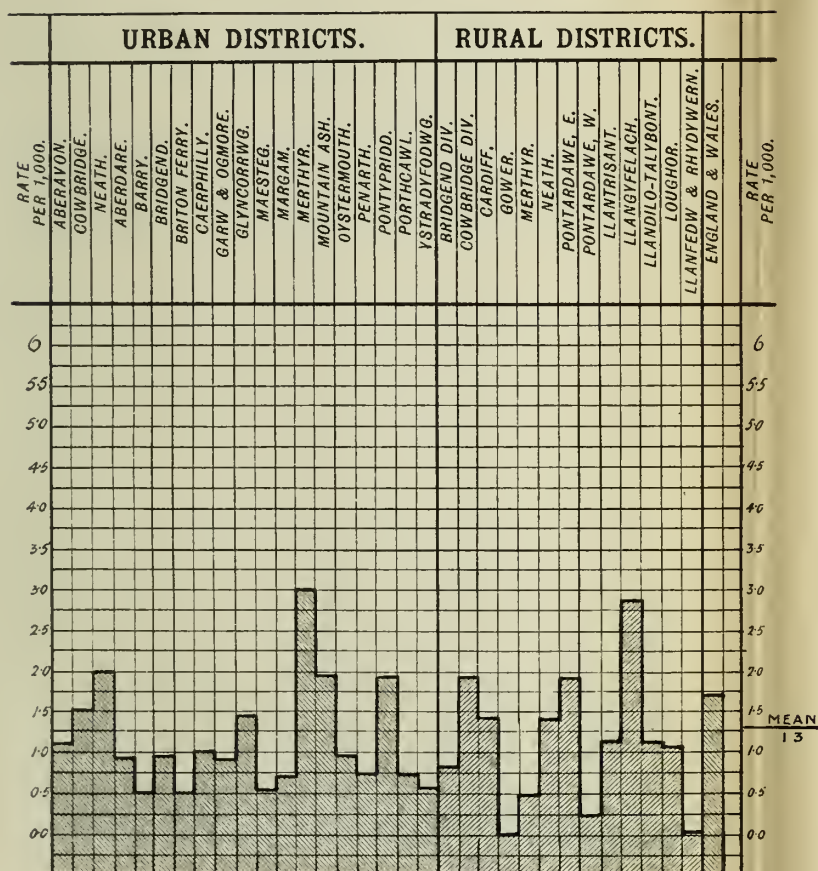


# INFANTILE MORTALITY - RATE PER 1,000 BIRTHS.





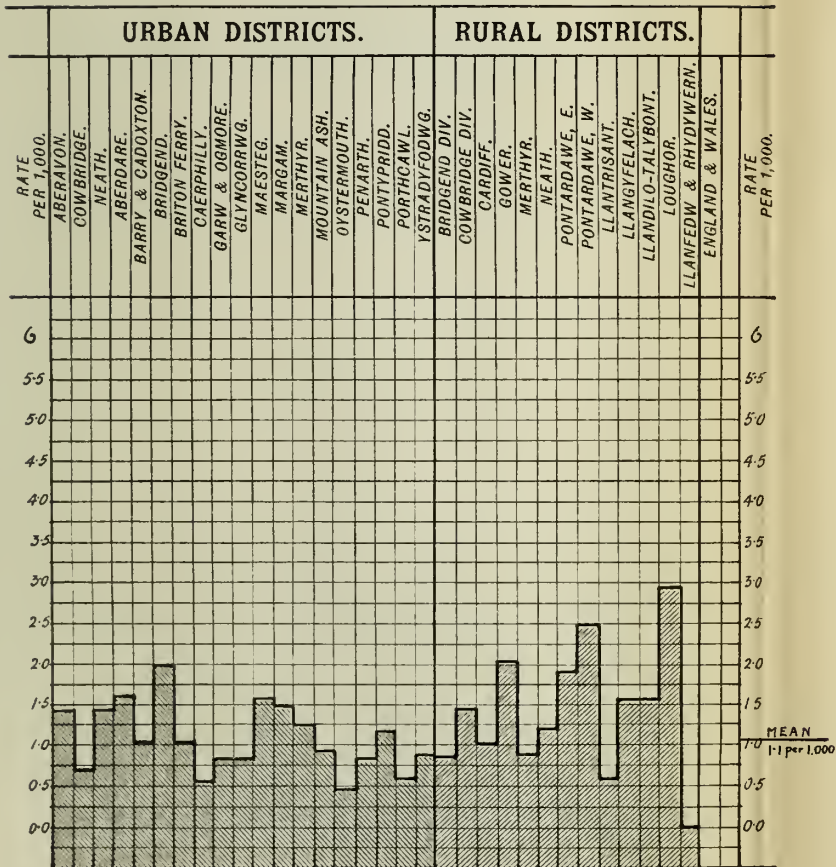
# ZYMOTIC DEATH-RATE.





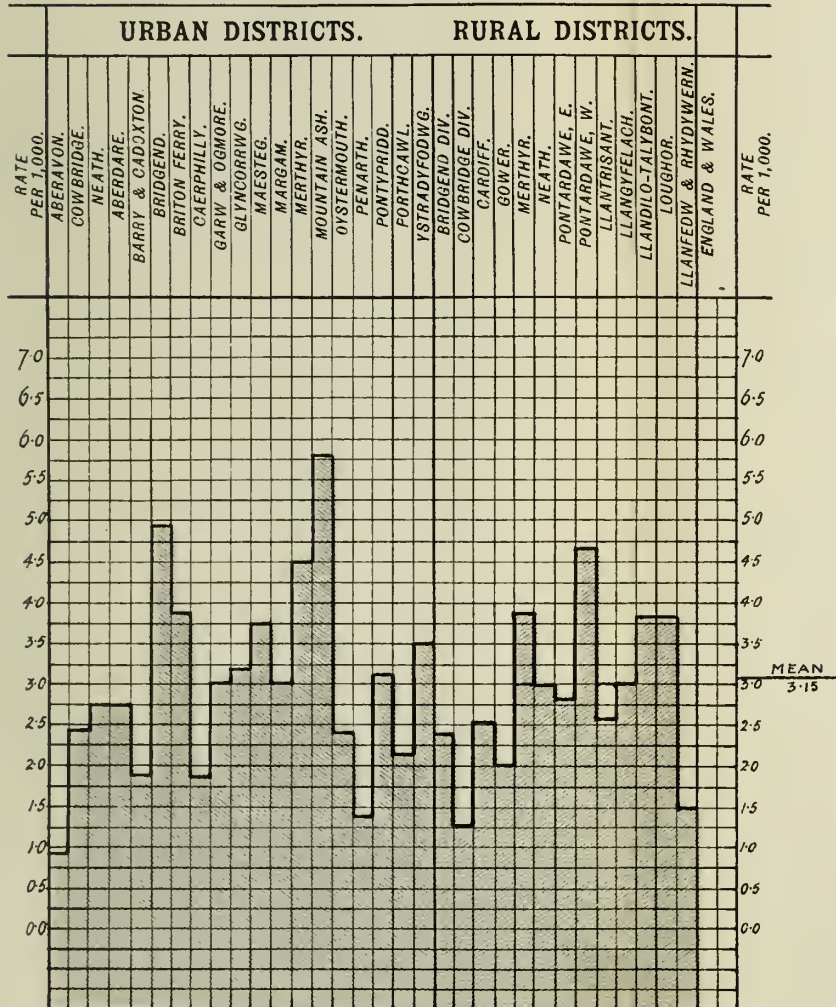


# PHTHISIS DEATH-RATE.





# RESPIRATORY DEATH-RATE.







## PART II.

## URBAN DISTRICTS.

**ABERAVON (Borough.)**

Medical Officer of Health.—J. ARNALLT JONES, M.R.C.S., L.R.C.P.

Area in acres, 2,060.

	1891.	1894.
Population .. ..	6,281 .. ..	6,850 <sup>1</sup> (estimated).
Birth-rate, 36·6.	Death-rate, 15·6.	Zymotic-rate, 1·1.
	Phthisis death-rate, 1·4.	Respiratory death-rate, 0·9.

The above rates compare favourably with those for 1893. Of the 107 deaths registered, 35 were under one year of age, and 32 were 60 years and upwards.

## INFECTIOUS DISEASES.

The number of cases of Infectious Diseases notified were :—

					CASES.	DEATHS.
Small pox	..	..	..	..	16	2
Scarlatina	..	..	..	..	1	—
Typhoid fever	..	..	..	..	1	—
Croup ..	..	..	..	..	2	1
Erysipelas	..	..	..	..	11	—
Puerperal fever	..	..	..	..	3	—
					<hr/>	<hr/>
			Making a total of	.. ..	34	3
Measles ..	..	..	..	..		1
Diarrhœa	..	..	..	..		4
						<hr/>
				Total ..		8

With the exception of the 16 Small pox cases, the Borough was particularly free from any infectious disease. It is stated that no form of infectious disease has in recent years given so much trouble and anxiety as the outbreak of Small pox, and this is attributed to the fact that there was no isolation accommodation then provided. Antiseptic fluids and other accessories were liberally provided, and nurses engaged by the Sanitary Authority for the treatment and supervision of the sick. In the absence of isolation accommodation, the relatives and friends could not be depended upon to keep away from the sick, and it was practically impossible for members of the infected families to be anything but carriers of the contagion as long as they followed their daily avocations. Vaccination was widely practised, and disinfectants freely used. The number of successful vaccinations and

re-vaccinations amounted to over 700 during the period. The epidemic is clearly traced to importation. "A mariner, convalescent from Smallpox returned home (he resided in a part of Margam District, adjoining Aberavon), and a short time after his arrival his wife sickened with Small pox." The second patient was a relative of the mariner's wife, and had been visiting her. The remaining cases were clearly due to personal intercourse.

No recently vaccinated person acquired the disease, though many of them were in attendance upon the sick. The fatal cases occurred only amongst the unvaccinated or where vaccination had been practised insufficiently and at a period so remote that its protective influence had vanished. In young persons vaccinated in infancy the symptoms were mild, in a few particularly so. The infected bedding and clothing were destroyed in all instances, and the disinfection of the rooms was carried out by the Sanitary Inspector.

The Medical Officer of Health writes :—"A Disinfecting Apparatus would have been a great boon to us at the time of the smallpox epidemic. I have in previous reports alluded to this matter, and I consider it a subject worthy of your early consideration ; without such an apparatus, disinfection can never be complete, and in the cases of many fevers such as Smallpox, Scarlatina, Measles, &c., disease is spread as much, if not more, by infected clothing than by personal contact, and insufficient disinfection is a risky proceeding—better than none it is true—but when carried out for economical reasons it is a poor economy at the best."

A case of Scarlatina and another of Typhoid Fever were imported, but did not spread.

### GENERAL CONDITIONS.

The subject of *overcrowding* has not received the attention which the Medical Officer of Health would wish. In his Annual Report for 1893, the matter was alluded to, and of a house-to-house visitation of the district suggested, but this has not been done. The matter is again referred to because of its great importance, "and such an inspection would bring to light many grave defects in the houses of the working men, such as leaky roofs, damp walls, doors and windows admitting draughts, unpaved and unboarded floors and such like conditions, which go far towards rendering life in a workman's cottage unhealthy and lacking in reasonable comfort." In a large number of cottages in this Borough, more especially in the older houses, there are no fire grates in the sleeping rooms. At Caerwen stoves are about to be placed in a bed room in each house.

The quality of the *water supply* is good, but the quantity is insufficient in dry seasons. The Authority is advised to consider the advisability of enlarging the storage reservoir.

The *dairies and cowsheds* were frequently visited during the year and found in a fairly satisfactory state.

The *public slaughter house* has of late been in an unsatisfactory condition, and it is a question whether it should be ended or mended. It is suggested that the floors should be concreted, regulations framed and enforced, and a plentiful supply of water and facilities for free flushing and purification provided. The importance of having all the meat sold in the Borough slaughtered in the public slaughter houses and inspected by a Corporation official is brought to the Authority's notice, as such a procedure will prevent the possible sale of unsound meat, for suspicious carcases could then be inspected with the organs attached—an important matter in many cases where the organs only show signs of disease and the carcase does not.

The *common lodging houses* are stated to be carefully looked after by the Inspector of Police.

The *scavenging* is carried out regularly.

The pollution of the river Afan which is taking place in the Neath (Rural) and Glyncoerwg (Urban) Districts, continues unabated.

### IMPROVEMENTS.

These are not referred to in the report.

## REQUIREMENTS.

- (1) A disinfecting apparatus.
- (2) The enlargement of the storage reservoir.
- (3) A house-to-house inspection.
- (4) The improvement of the public slaughter-house.
- (5) Ash bins by Mountain Board School and the end of Llewellyn Street.
- (6) More attention to the existing overcrowding.

## REMARKS.

The report is printed and the necessary tables supplied.

The Surveyor's report is also printed, and deals exhaustively with *dwelling-houses and schools, common lodging houses, dairies, milkshops and cowsheds, bakehouses, slaughterhouses, ashpits and privies, disposal of refuse and manure, drainage, water supply, offensive trades, nuisances, unwholesome food, infectious diseases, general condition, &c.* The Surveyor suggests :—

- (1) That bye-laws be made under section 23 of the Public Health Acts Amendment Act, 1890, with respect to keeping w.c.'s supplied with water for flushing, height of rooms to be used for human habitation, and the paving, &c., of backyards.
- (2) That all cast iron slop water traps be condemned and replaced by earthenware ones.
- (3) That all water taps be removed inside of houses instead of outside, so as to prevent the great waste which now exists.

**COWBRIDGE (Borough).**

Medical Officer of Health—A. W. SHEPHERD, L.R.C.P.I., L.R.C.S.

Area in acres, 84.

		1891.			1894.
Population	.. ..	1,360	.. ..	.. ..	1,250 (estimated).
Birth-rate, 25·6.	Death-rate, 21·6.	Zymotic-rate, 1·5.	Infant Mortality-rate, 93·7.		
Phthisis death-rate, 0·8.		Respiratory death-rate, 2·4.			

The general death-rate is exceedingly high for a small town like Cowbridge, situated in an agricultural district. All the death-rates compare unfavourably with that for 1893.

**INFECTIOUS DISEASES.**

The “Infectious Disease Notification Act, 1889,” came into force on June 1st. Six cases of infectious diseases were notified, viz.: Erysipelas, 2; puerperal fever, 2; and typhoid fever, 3. One typhoid fever and one puerperal fever case ended fatally.

*Two* of the *typhoid cases* are attributed to polluted water, but the third could not be satisfactorily traced.

The *puerperal fever*.—The Medical Officer of Health writes—“The only case of this disease was in the East Village, and the house, which was quite unfit for habitation, was reported by me to the Authority, who gave notice to owner to put it in proper repair.” In this instance many articles were burnt by the Authority, and compensation given.

Disinfectants are supplied free to those in poor circumstances, and the Medical Officer of Health advises the Corporation to have a supply of “sulphur candles” and “corrosive sublimate soloids” ready for disinfecting purposes.

**GENERAL CONDITIONS.**

*Water Supply*.—The whole town is inadequately supplied “every person in the town knows well that two pumps are nothing like sufficient to supply the wants of the inhabitants . . . . The Authority have the matter of water supply under consideration, and I can only urge upon them the responsibility which rests upon them if we should be visited with an attack of Cholera or Typhoid. If water cannot be brought to the town on account of expense I would suggest sinking tubes. I have seen them used with the best results in Cholera stricken places.”

The *slaughter houses* have been inspected on several occasions, and, as a rule, found clean. One has been closed. It is stated that one Public Slaughter House would suit the requirements of the place.

The *common lodging houses*, three in number, have been frequently inspected, with the result that one of them was found not satisfactorily kept.

**IMPROVEMENTS.**

(1) The Head Master of the Grammar School has opened up a large space in front of the school by removing the ruins of some old cottages. A covered playground, a carpenter’s shop, and a set of earth closets, together with a cottage for the isolation of infectious cases, has been provided (by the Head Master) for the same institution.

A new post office and another new dwelling are being erected on the site of two old cottages in the East Village. The Report further states that “Part of Cattle Market has been laid in granolithics,” and that “The Men’s Institute is in course of construction at the back of the Town Hall.”

No other improvements are specified.



## REQUIREMENTS.

These are not specified in the Report.

## REMARKS.

The Report is not printed, and there is no report of any kind from the Sanitary Inspector and no account of any work having been accomplished by this officer.

**NEATH (Borough).**

Medical Officer of Health—J. W. THOMAS, M.R.C.S., L.R.C.P.

Area in acres, 1,427.

	1891.	1894.
Population .. ..	11,157 .. ..	11,500 (estimated).
Birth-rate, 31·5.	Death-rate, 16·3.	Zymotic-rate, 2·0.
	Phthisis death-rate, 1·4.	Respiratory death-rate, 2·7.
		Infant Mortality-rate, 163.

Of 169, the total deaths registered, 16 occurred amongst inmates of the Neath Union Workhouse.

**INFECTIOUS DISEASES.**

563 cases were notified, comprising 5 scarlatina, 5 diphtheria, 5 membranous croup, 7 enteric or typhoid fever, 13 erysipelas, and 528 measles. Three cases of diphtheria, 5 of membranous croup, 1 enteric or typhoid, 2 erysipelas, and 3 measles proved fatal. There were also 4 cases of whooping and 5 of diarrhoea that proved fatal. No cases were isolated or treated in the Infectious Diseases Hospital.

*Measles*.—Not less than 528 cases were notified. The disease, which was epidemic during January, February, March, April and May, was of a mild type, and occasioned only three deaths. At first Dr. Thomas visited every infected household, with the object of prevailing upon the parents to isolate, as far as possible, the sick, so as to limit the spread of the malady. Such a procedure, however, was soon found impracticable, for the disease was so mild that in many instances the infected children attended school with but little discomfort, until the rash or desquamation were detected by the teacher or some other person.

The occurrence of the *diphtheria* cases were found associated with *overcrowding* and *defective drainage*.

*Typhoid Fever*.—Of these 7 cases, 1 is attributed to a foul privy, 1 to importation, 2 to sewer gas, and 2 to polluted water. Precautionary measures were adopted in each case, and the defects found to exist in or on the infected premises were at once remedied.

Several cases of *diarrhoea* occurred in August and September, but of a much milder type than those in 1893.

**GENERAL CONDITIONS.**

*Water Supply*.—Deficient in quantity in summer and autumn, and too intermittent. It is satisfactory in quality.

The *Slaughter House* was regularly inspected, and the Bye-laws relative to its management as much as possible enforced. Several private slaughter houses still exist, and it is found difficult to exercise any active supervision over them.

*Bakehouses, Dairies and Cowsheds*.—Inspected systematically, and found fairly satisfactory.

*Common Lodging Houses*.—Systematically inspected and found in a fair condition. No. 1, Castle Street is totally unfit to be used as a common lodging house.

**IMPROVEMENTS.**

- (1) Woodland Cottage drained into the main sewer.
- (2) Cresswell Road and Davies' Road sewered, roads formed, metalled, and footways paved.
- (3) Water laid on to Mount Pleasant, Bowen Street, and the new street between Henry and Bowen Streets.

## REQUIREMENTS.

- (1) The *drainage* of Gnoll Park Road, Bank side, and the Green.
- (2) A more extended and constant *water service*. There are many houses in the town—notably Rosser and Henry streets—inadequately supplied.
- (3) The repair or closure of *Insanitary Dwellings*:—

*Lake's Court* is described as very insanitary, surroundings of dwellings are sewage soddened; the houses are damp and their windows without glass, their interiors are filthy through want of limewashing. Three of the houses are simply one-roomed dwellings, and closets are built against the end of two of them. Dr. Thomas describes the houses in this court as “wholly unfit for human habitation.” *Jolly Court*.—Dr. Thomas writes, “Many times in the year these houses are flooded to the depth of 18 inches, and after the water recedes the floors are covered with sewage matter.” The houses in *Saviour's Court* are in an exceedingly bad state of repair.

The Report is *not* printed, and there is no statement of the work done by the Sanitary Inspector.

**ABERDARE.**

Medical Officer of Health—D. DAVIES, F.R.C.S.

Area in acres, 15,127.

	1891.	1894.
Population .. ..	40,917	42,349 (estimated).
Birth-rate, 35·01.	Death-rate, 18·04.	Zymotic-rate, 0·9.
	Phthisis death-rate, 1·6.	Respiratory death-rate, 2·7.
		Infant Mortality-rate, 170.

The general death-rate is high, the others are satisfactory, and compare favourably with those in former years.

During the year there were 764 deaths, and 1,483 births, 252 of the total 764 deaths registered, or 33 per cent., were those of children under 1 year of age.

**INFECTIOUS DISEASES.**

This is one of the few districts in the County where the Infectious Disease (Notification) Act, has not been adopted, so that little or nothing is definitely known about the prevalence of infectious sickness. 38 deaths are attributed to the principal Zymotic diseases, viz. :—7 measles, 2 scarlet fever, 5 diphtheria, 3 whooping cough, 2 puerperal fever, 1 typhoid fever, and 17 diarrhœa.

**GENERAL CONDITIONS.**

No information is given.

**IMPROVEMENTS.**

These are not specified.

**REQUIREMENTS.**

These are not specified.

The Medical Officer of Health does not prepare an annual report, and four quarterly reports *only* have been received from the Clerk. These are *not* printed, and deal entirely with vital statistics, so that it is impossible from the want of material to compile a summary. The tables required by the Local Government Board are *not* appended nor is there a statement showing the work done by the Sanitary Inspector.



**BARRY AND CADOXTON.**

Medical Officer of Health—GEORGE NEALE, L.R.C.P., &c.

Area in acres, 3,323.

	1881.	1891.	1894.
Population ..	165 .. ..	12,665 .. ..	19,263 (estimated).
Birth-rate, 36·4.	Death-rate, 10·9.	Zymotic-rate, 0·5.	Infant Mortality-rate, 110.
	Phthisis death-rate, 1·0.	Respiratory death-rate, 1·9.	

These various rates are very satisfactory, and compare most favourably with those for the district and for England and Wales. The birth-rate is high, as would be expected in a thriving and healthily situated industrial centre. The increase in the population is very marked. 78 out of 210, the total deaths registered, occurred in infants under one year.

**INFECTIOUS DISEASES.**

323 cases were notified, thus:—

	CASES.	DEATHS.
Small pox .. .. .	7 ..	0
Diphtheria .. .. .	8 ..	3
Memb. croup .. .. .	3 ..	3
Erysipelas .. .. .	37 ..	0
Scarlet fever .. .. .	103 ..	2
Typhoid fever .. .. .	18 ..	0
Puerperal fever .. .. .	3 ..	0
Diarrhœa .. .. .	143 ..	5

*Small Pox.*—Seven cases came under observation. The first cases were imported in the persons of two seamen on February 20th, from Havre, where the disease was then prevalent. The infected were promptly isolated, and the remainder of the crew, who were in good health, re-vaccinated, together with the officials connected in any way with the disease. All possible precautionary measures were carried out. During the time the patients were in the hospital, the male attendant contracted the disease in a mild form.

The third case, also in the person of a seaman, was imported from Middlesborough.

On June 9th, two more cases were imported from Havre.

On August 23rd, a case was notified from Cadoxton.

Rigorous preventitive measures were adopted, and were successful in preventing the further spread of the disease in each instance.

This is the first year since the opening of the Dock that Smallpox has appeared in the district.

*Diphtheria.*—8 cases were notified, as against 14 in 1893, and 11 in 1892.

*Scarlet Fever.*—Number of cases notified were 103, as compared with 137 in 1893, and 279 in 1892. The cases were distributed in each quarter of the year as follows:—First quarter, 12; second quarter, 12; third quarter, 43; and the fourth quarter, 36. The disease prevailed throughout the year, but only to a limited extent during the first and second quarter. It was of an exceedingly mild type, and it was only in the later stages of desquamation that several cases could be discovered.

*Diarrhœa.*—There were 5 deaths registered from the 143 cases notified, giving a death rate of 0·26 per thousand, as against 1·71 in 1893, and 0·64 in 1892.

In August it was found advisable to adopt the recommendation of the Local Government Board as to the notification of Diarrhœa in persons over one year of age until the end of September, so as to make the precautions on land more perfect in case of the introduction of Cholera to the district.

*Infectious Diseases Hospital.*—Plans, sections, and estimates for a new Hospital have been prepared by the Surveyor and submitted to the Local Government Board for approval. An inquiry was held on 1st January, 1895, and application made to borrow the sum of £6,197 for its erection. This loan has since been sanctioned.

### GENERAL CONDITION.

A *systematic inspection* of the district was made and the sanitary defects discovered have been remedied. Such a procedure is invaluable, and I only wish it was carried out in other districts.

The *Scavenging*, which is undertaken by the Authority, is efficiently performed under the supervision of the officers of the Board.

The *Public Slaughter House* has been regularly inspected.

The *Shops* kept for the sale of *meat, poultry, game, fruit*, and other articles of food exposed for sale and intended for the food of man, have been systematically inspected. 560 pounds of beef were seized and condemned as unfit for food, and destroyed by order of the magistrates.

The *Factory and Workshops' Act, 1891*, has been carried out according to the circular issued by the Local Government Board, September, 1891.

*Dairies, Cowsheds, and Milkshops.*—The number of registered milksellers is 31. Their premises were inspected and the occupiers required to comply with the provisions of the Order and with the Regulations made under it. An active supervision of the premises occupied by milk purveyors, and a rigid enforcement of the legal powers conferred on the Local Authority by the Dairies, Cowsheds, and Milkshops' Order has resulted in a considerable change for the better in the condition of these places.

*Bakehouses and Common Lodging Houses* have been frequently inspected and found satisfactory.

*Seamens' Lodging Houses.*—Bye-laws in respect of these came into force July, 1893. The number licensed is 38, to accommodate 420 seamen. They were visited at least once a week (day and night), and found to be in a satisfactory condition. In seven instances legal proceedings were taken against persons acting in contravention of the 48th section of the Merchants' Shipping (Fishing Boats') Act, 1883.

### IMPROVEMENTS.

These are not specified in the report, but from personal knowledge I can say that they are many, as the loans sanctioned by the Local Government Board shows:—

£2,304 for Private Streets Improvements.

£1,967 for Sewerage and Sewage Disposal.

£200,000 for the acquisition of the Gas and Water Undertakings.

### REQUIREMENTS.

A Cholera and Infectious Diseases Hospitals, both of which are forthcoming.

**BRIDGEND.**

Medical Officer of Health—WYNDHAM RANDALL, M.R.C.S., L.R.C.P.

Area in acres, 629.

			1891.				1894.
Population	..	..	4,896	..	..	..	5,426 (estimated).
Birth-rate 33·3.	*Death-rate, 15·0.		Zymotic-rate, 0·9.		Infant Mortality-rate, 99·4.		
	Phthisis death-rate, 2·0.		Respiratory death-rate, 4·2.				

These various rates are satisfactory, and compare very favourably with those for former years.

**INFECTIOUS DISEASES.**

The number of notifications received were 39, including 7 of scarlatina, 7 diphtheria, 14 enteric or typhoid fever, 8 continued fever, 1 puerperal and 2 erysipelas. There occurred 1 death from diphtheria, 3 from typhoid fever, and 1 from diarrhœa (not notifiable). Of the 8 cases of continued fever notified, the greater number was most probably enteric. During the *first quarter* there occurred—1 case of puerperal fever, 2 enteric fever, both of which ended fatally. During the *second quarter*—5 cases of scarlet fever, 3 diphtheria (1 fatal), 1 enteric fever, and 1 erysipelas. During the *third quarter*—2 scarlet fever, 2 diphtheria, 5 enteric fever, and 1 continued fever. During the *fourth quarter*—2 diphtheria, 6 enteric fever (1 fatal), 7 continued fever, and 1 erysipelas.

The *enteric fever* and *diphtheria* cases were generally found to be associated with sanitary defects, such as choked and unventilated drains and defective traps, allowing the escape of sewer gases.

In cases of scarlet fever, the school masters were warned not to admit members of infected households, but this was found to be of little avail, as such children play with others out of school hours, and Dr. Randall writes—“But little good can result in the absence of means for isolation of the patients and of disinfection of infected clothing by means of superheated steam. . . . In cases of enteric fever and diphtheria, disinfection of clothing, &c., is also demanded, and in the former a more systematic disinfection of excreta.”

**GENERAL CONDITIONS.**

As far as is possible, in the absence of a system of sewerage, it would appear that the general sanitary condition of the district has been improved.

The *water supply* continues abundant and satisfactory, and the only locality stated to be inadequately supplied is Cowbridge Road (same as in 1893). It has been found that in a few cases the service pipes run underneath w.c.'s, and are surrounded with filth.

*Sewerage and Drainage.*—“Plans for the sewerage of the whole district, together with a portion of the adjoining rural district, have been prepared and submitted to the Local Government Board. This much-needed improvement has been left in abeyance owing to the refusal of the land owner to state the amount claimed for way-leave.”

Most of the *Common Lodging Houses*—and they are many—are unfit for human habitation. Their condition is well known to the Council, and the Medical Officer has called attention to their condition time after time.

*Slaughter Houses.* It is reported that some improvements are being carried out at the Dunraven slaughter house, but not to the extent that is desirable—the stalls and pens are still allowed to drain into the killing room. Another slaughter house is reported as “in a filthy state and unfit for killing animals for human food.”

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\* Excluding the deaths which occurred in the Workhouse, the general death-rate would be 13·4.

*No regulations* have yet been framed with respect to dairies, cowsheds, and milk shops. This is *one* of the few districts in the County where regulations have not been framed. They are very necessary, and without them the intentions of the Order cannot be carried into effect.

*Diseased Meat.* The Inspector seized 6 rabbits and destroyed them; he also seized the carcasses of a sheep and pig at the slaughter house, and obtained a magistrate's order to destroy them.

A *house-to-house* inspection has been made in the case of 9 streets. Sanitary arrangements were found to be frequently defective, *unventilated drains, defective traps, foul and insufficiently flushed w.c's. &c.* were common.

The total number of houses inspected was 369. 8 notices were served under the Housing of the Working Classes Act, 1890.

### IMPROVEMENTS.

Amongst other improvements, the following were effected:—

- 64 defective drains cleaned and repaired.
- 8 new drains provided.
- 15 drains provided with intercepting traps.
- 18 inspection chambers built.
- 60 bell lip and broken traps removed and replaced by stoneware gully traps.
- 53 unventilated drains ventilated with 4-inch shafts.
- 45 rain water pipes and sinks disconnected from drains, and allowed to discharge over trapped gullies.
- 51 defective soil pipes removed from inside houses and placed outside.
- 82 defective w.c. pans removed and replaced by new ones.
- 89 w.c's. provided with flushing cisterns and water laid on.
- 9 new w.c's. have been erected in the place of privies.
- 5 cesspools have been filled in and drains connected with the public sewers.
- 2 piggeries have been removed.
- 4 cesspools repaired and rendered water-tight.
- 15 houses supplied with water.
- 4 dwelling-houses closed as unfit for human habitation; for three of them a closing order was made by the justices the previous year.

There is no reason why the Surveyor should be ashamed of the *work done* by him during the year.

### REQUIREMENTS.

- (1) Provisions for isolation and disinfection.
  - (2) A scheme of sewerage and drainage.
  - (3) The provision of manhole covers and tanks so as to facilitate the flushing of sewers.
  - (4) The adoption of the "Infectious Disease (Prevention) Act, 1890."
  - (5) The necessity of having the disinfection of dwellings, articles of bedding, clothing, &c., carried out by competent persons.
  - (6) The framing of regulations under the *Dairies' Cowsheds' and Milkshops' Order*.
- The Report is *not* printed. There is also an excellent Report from the Surveyor and Sanitary Inspector.



## BRITON FERRY.

Medical Officer of Health—E. VERNON PEGGE, M.R.C.S., L.R.C.P.

Area in acres, 1,381.

			1891.				1894.
Population	..	..	5,779	..	..	..	6,000 (estimated).
Birth-rate, 36·8.	Death-rate, 17·1.	Zymotic-rate, 0·5.		Infant Mortality-rate, 194.			
Phthisis death-rate, 1·0.		Respiratory death-rate, 3·8.					

The Infant Mortality rate is very high, 43 out of 103 deaths being infants under 1 year old.

## INFECTIOUS DISEASES.

This district is one of *four* in the county where the Notification of Infectious Diseases is *not* compulsory. Dr. Pegge writes :—" I have on many previous occasions urged upon the Board the advisability of their adopting the Infectious Disease Notification Act, and I must again advise its adoption, together with the Infectious Disease (Prevention) Act.

During March three cases of *small-pox* occurred, all three being in Woodland Row. The disease was imported from Aberavon, and the three patients were isolated at the Fever Hospital of the Neath Rural Authority. All recovered; the houses were thoroughly disinfected, and bedclothes, &c., destroyed, and there was no spread of the disease.

Fourteen cases of *typhoid fever*, with two deaths, came under observation.

Several mild cases of scarlet fever and measles also came under notice.

## GENERAL CONDITIONS.

Many of the streets and pavements are reported to be in a disgraceful condition. In Regent Street West there is a swamp. Hunter and Thomas Streets and several others are covered with large stone and thus rendered unfit for traffic. The roads from year to year are steadily getting worse.

House accommodation is deficient, and overcrowding is prevalent.

The troughing and down pipes are, in many places, broken or entirely gone.

Choked drains and closets are common. Gratings are often found to be broken, and flushing tanks out of repair.

The two *slaughter-houses* are not satisfactorily kept, though of late there has been an improvement in this respect.

The *cowsheds and bakehouses* were found in a sanitary condition.

The *water supply* is not any too good, and at times it has been scanty.

Considerable trouble was experienced during wet seasons owing to the lower part of the district becoming flooded, and it is reported that many houses were flooded for days, at inconvenience to the inhabitants, and risk to their health.

## IMPROVEMENTS.

Several improvements are reported as having been carried out at Giant's Grave, and others are now being made. Many dwellings have been entirely re-modelled. There is yet room for improvement.

## REQUIREMENTS.

- (1) An Isolation Hospital and a Disinfecting Apparatus.
- (2) A better supply of water, especially for Giant's Grave.
- (3) The adoption of the Infectious Disease Notification and Prevention Acts.
- (4) The adoption of the Private Streets Works Act, 1892, and the repair of many streets and pavements that are at present in a disgraceful condition.
- (5) Regulations for the better management of slaughter houses.
- (6) The repair of choked drains, broken W.C.'s and flushings, cisterns, and tanks.
- (7) Troughing and down fall pipes are needed in many instances.

There is *no* Report from the Inspector of Nuisances.

**CAERPHILLY.**

Medical Officer of Health—T. W. THOMAS, M.R.C.S., L.S.A.

Area in acres, 17,000.

	1893.	1894.
Population .. .. .	1,400	1,400 (estimated).
Birth-rate, 22·8.	Death-rate, 11·9.	Zymotic-rate, 1·0.
	Phthisis death-rate, 0·6.	Infant Mortality-rate, 15·7.
		Respiratory death-rate, 1·9.

Out of the total deaths registered, 50 or 30 per cent. occurred amongst infants under 1 year of age. The birth-rate is exceedingly low, which is difficult to understand in a mining district such as this is.

**INFECTIOUS DISEASES.**

Thirty-three notifications were received during the year, thus:—

	CASES.	DEATHS.
Small pox .. .. .	3	0
Scarlet fever .. .. .	9	0
Diphtheria .. .. .	4	2
Typhoid fever .. .. .	12	1
Puerperal .. .. .	0	1
Erysipelas .. .. .	4	0
	<hr/> 33	<hr/> 4
Measles .. .. .		5
Whooping cough .. .. .		3
		<hr/> 12
Total .. .. .		

*Measles* was prevalent in various localities, but chiefly in the Taff's Well Ward, to which it was first imported from Pontypridd.

*Whooping Cough* was moderately prevalent during the spring and summer. In this connection Dr. Thomas writes, "It is a source of regret that more care is not shown by parents in preventing their children suffering from this highly infectious disease from attending schools and public assemblies."

*Diarrhoea* was not nearly so prevalent as in 1893.

A mild form of *influenza* was epidemic at the beginning of the year.

Three cases of smallpox occurred at the town of Caerphilly, the first case having been imported from the neighbourhood of Bristol. The first case was at once isolated in an empty shop placed at the disposal of the Authority by the owner, and the attendant was vaccinated. Soon afterwards the sister-in-law, who in the meantime had been re-vaccinated successfully, had the complaint, and she was also removed to the same building. After the convalescence of this patient, the old nurse who looked after the case, suffered. By exercising all precautionary measures the disease was stamped out. All articles of bedding and clothing were destroyed and the building thoroughly disinfected.

*Typhoid fever*.—Dr. Thomas attributes the typhoid fever cases to *polluted water* and *defective drainage*, and writes—"Typhoid fever was again prevalent in the Taff's Well Ward, and I still maintain that the water supply must be regarded as the principal source of the disease, inasmuch as the wells are liable to pollution from cesspools, &c., in their immediate vicinity. The cases of typhoid in the Town Ward I attribute to defective drainage, sewer gas in one case finding its way out at the very doors of the dwellings." The usual precautions were adopted in all cases to have the stools thoroughly disinfected.

## GENERAL CONDITIONS.

The sanitary condition of each ward separately is given in detail.

*Town Ward* (Caerphilly).—Many defects are to be observed, especially with regard to the drainage. The condition of Martin's Road is described as a disgrace. The main streets are improperly paved. The common lodging house is not registered, and, from personal inspection, I know it to be unfit for the purpose. The scavenging is efficiently carried out, but the brook at the back of Castle street is made use of for a receptacle for refuse and other filth. Of the *water supply* it is reported—"Fortunately the wet summer months helped us considerably, otherwise we should have had a scarcity of water. This matter is one of such vital importance, that I must impress upon you the imperative necessity of soon seeking a more efficient supply."

*Aber and Senghenydd*.—The rapid growth of Senghenydd and the reckless way some of the houses were built without plans, drains, closet accommodation, &c., induced the M. O. H. to condemn 11 new houses as unfit for human habitation, and until legal proceedings were taken no improvements were effected.

The *removal of refuse* should have more attention, and a proper *water supply* provided.

*Pwllypant*.—Attention is called to the very unsatisfactory condition of Stanley Terrace. The district is also imperfectly supplied with water.

*Ystrad Ward*.—"The principal village in this ward is Llanbradach, and it is sadly in need of a better *water supply* and *drainage*. The condition of Wingfield Terrace has been so bad that no one could get out into the back gardens in wet weather without wading through from 4 to 6 inches of water." The removal of refuse has been carried out very indifferently.

*Nelson Ward*.—The *water supply* is described as wholesome and plentiful. The drainage is still very imperfect, and the removal of refuse only fairly carried out. The slaughter houses are described as faulty in construction and defective in drainage, and the desirability of erecting a public one outside the place is again referred to. 9 houses are reported as unfit for human habitation.

*Taff's Well Ward*.—The Pontypridd Water Works Company are about to supply the villages with water, which is much needed. The drainage has not been improved and is unsatisfactory. Typhoid fever has been endemic here for years past.

## IMPROVEMENTS.

- (1) Some improvements are now being effected at Senghenydd.
- (2) The water mains at Nelson have been extended to Abernant.

No others are mentioned.

## REQUIREMENTS.

- (1) An Isolation Hospital and Disinfecting Apparatus.
- (2) Better supplies of water for Caerphilly, Senghenydd, Llanbradach and Pwllypant, and for the villages of the Taff's Well Ward.
- (3) The drainage and sewerage of portions of Caerphilly, Senghenydd, Llanbradach and Pwllypant, and of the villages in the Taff's Well Ward.
- (4) The closure or repair of houses that are unfit for human habitation.
- (5) A public slaughter house at Nelson.
- (6) The better scavenging of Senghenydd, Aber and Pwllypant.
- (7) The erection of public urinals throughout the district.

The report is *not* printed. Appended is an exhaustive report showing the good work done by the Sanitary Inspector.



## GARW AND OGMORE.

Medical Officer of Health—D. J. THOMAS, M.R.C.S., L.R.C.P.

Area in acres, 17,936.

	1891	1894.
Population .. ..	13,080	15,600 (estimated).
Birth rate, 37·8.	Death rate, 15·19.	Zymotic-rate, 0·9.
	Phthisis death-rate, 0·8.	Respiratory death-rate, 3·0.
		Infant Mortality-rate, 173.

All these death-rates compare very favourably with those for 1893. The Infantile Mortality is still high, in the general death there is a difference of 5·5 per 1,000 in favour of 1894, as compared with 1893. Of the 236 deaths registered, 104 were of those of children under 1 year of age.

### INFECTIOUS DISEASES.

The number of notifications was 51, made up of Scarlatina 26, Enteric or Typhoid Fever 19, Puerperal Fever, 7, and Erysipelas 3.

*Scarlatina*.—There are no deaths from this malady as against 9 in 1893.

*Enteric or Typhoid Fever*.—5 cases proved fatal, all in the Ogmores Ward. This is a decrease of 3 on the previous year. 3 cases, all in one house at Nantymoel, are attributed to the insuction of sewer gases to the water main; the defect was remedied and no more cases occurred. Another case was attributed to a defective trap, allowing the escape of sewer gases close to the back door.

*Puerperal Fever*.—4 deaths were registered—3 in the Ogmores and 1 in the Garw Ward. 2 occurred in primipara; 3 were attended by midwives and medical men, and 1 by a midwife only. The midwives were stopped from attendance on the lying-in for 3 months in each instance, the bedding burnt, and the house fumigated with Sulphur, and in no instance did a second case occur. Dr. Thomas made enquiries as to the origin of each case, but was unable to satisfy himself as to its cause. He writes: "I am glad to state that this disease shows a considerable decrease during 1894—the number of deaths during 1893 being 11, as against 4 during last year. I believe this improvement to be due chiefly to stricter attention by midwives to antiseptics, and to abstention on their part from attending on wounds and laying out of bodies. I have endeavoured to stop all midwives dressing wounds and laying out corpses, but there may be some in the district yet who are practising midwifery and doing a little primitive surgery, such as dressing gathered breasts and chronic ulcers, with great danger to the lying-in women under their charge."

Of the 3 non-fatal cases, 2 were in the Garw and 1 in the Ogmores Ward. The midwives were stopped for 3 months in each case, and the rooms and bedding fumigated with Sulphur.

*Erysipelas*.—Three cases were notified—all in the Garw Ward. This is a considerable decrease over 1893 when 10 cases were notified.

### GENERAL CONDITIONS.

The Report states that a gradual improvement in the general sanitary condition of the district is noticeable. The Medical Officer of Health further writes: "but really this does not account for the decreased death-rate, as no great changes have been effected during 1894." The reduced death-rate is attributed to the absence of any epidemic, and to the wet summer season when but little Diarrhoea was prevalent.

*Drainage*.—No progress has been made with the Garw scheme. Dr. Thomas is of opinion that the Council is incurring a great responsibility in not providing for the disposal of the sewage of close upon 8,000 people. There still remains in the Ogmores several stench traps of the old-fashioned and worthless type. The outlet of the main sewer has not been completed.

*Water Supply.*—"The water supply is good and plentiful throughout with the exception of a few isolated houses. There are no means of storage in the district."

The *slaughter houses* are too near dwellings and not as clean as would be desirable.

#### IMPROVEMENTS.

The improvements effected are not specified.

#### REQUIREMENTS.

- (1) A scheme of sewerage for the Garw Valley.
- (2) The advisability of the Sanitary Inspectors devoting their whole time to their duties, and of making a house-to-house visitation of the whole district *every month*.
- (3) The registration of midwives practising in the district by the Council. Also that each medical man be asked by the Council to instruct the midwives under their charge in the proper use of antiseptics.
- (4) A water cart for each centre of population.
- (5) The provision of suitable public slaughter houses at suitable places in each ward.
- (6) That new dwellings should be certified as to drainage, water supply and general fitness for human habitation before any tenants are allowed to occupy them.

#### REMARKS.

The Report is printed, but there is no account of the work done by the Sanitary Inspectors.

**GLYNCORRWG.**

Medical Officer of Health—C. W. HEMMING, L.R.C.P., L.R.C.S.

Area in acres, 10,220.

	1891.	1894.
Population .. .. .	3,800 .. .. .	5,000 (estimated).
Birth-rate, 35·6.	Death-rate, 12·6.	Zymotic-rate, 1·4.
	Phthisis death-rate, 0·8.	Respiratory death-rate, 3·2.
		Infant Mortality-rate, 140.

The general death-rate is very low, and the others compare favourably with those for 1893.

**INFECTIOUS DISEASES.**

The Infectious Diseases Notification Act has been adopted some six months ago. 20 cases of scarlatina, 2 of typhoid fever, and 3 of erysipelas came under observation, and resulting in 1 death from typhoid fever.

One of the *typhoid fever* cases was imported from the Rhondda, but the other was not traced.

There were 20 cases of *scarlatina* during the year, evenly distributed through the village—all except 1 recovered.

A severe epidemic of whooping cough, lasting from March to the end of the year, was responsible for 4 deaths at Abergwynfi.

**GENERAL CONDITIONS.**

“There is no system of sewerage. One year's refuse, which would be better away, will have to be buried in or about the gardens of the houses.” The cesspit closets which are made use of are reported as always a source of danger and most obnoxious.

No other particulars are given.

**IMPROVEMENTS.**

(1) Extensions of water supplies at Cymmer and Abergwynfi.

(2) New drains at Abergwynfi.

No other particulars are given.

**REQUIREMENTS.**

(1) A house-to-house visitation of the district at certain intervals.

(2) The adoption of the Infectious Disease Prevention Act.

(3) Adoption of sewerage and drainage.

The Report is *not* printed, and there is no account of the work done by the Inspector appended.

**MAESTEG.**

Medical Officer of Health—EVAN DAVIES, L.R.C.P., L.R.C.S.

Area in acres, 6,709.

	1891.	1894.
Population .. .. .	9,417	10,000 (estimated).
Birth-rate, 40·1.	Death-rate, 17·4.	Zymotic-rate, 0·5.
	Plthisis death rate, 1·8.	Infant Mortality-rate, 14·4.
		Respiratory death-rate, 3·7.

**INFECTIOUS DISEASES.**

The Infectious Disease (Notification) Act was only adopted in April, and consequently there is no correct record of infectious sickness available. 46 cases of scarlatina, 1 membranous croup, 10 enteric or typhoid fever, and 3 erysipelas came to the knowledge of the Medical Officer of Health. These resulted in 3 deaths from scarlatina, and 1 from croup.

The first case of *scarlatina* was imported from Llanelly in the month of June. Disinfectants were freely used, and children from infected houses were prohibited from attending school.

Ten cases of *enteric fever* took place during the autumn, and 9 of them occurred in Brick Row and Llwydarth cottages. The sanitary condition and surroundings of these dwellings are described as “filthy”—there were no house drains, all the slop water from the upper Llwydarth cottages escaped to the back of the infected houses, and the sewer leading from the waterclosets had burst, and was discharging its contents at the back of the cottages. The cause of the fever in Brick Row may be attributable to the unclean state of the closets.

**GENERAL CONDITIONS.**

The *water supply* is reported as fairly satisfactory. It is occasionally turbid from oxide of iron deposit. The service was extended to a part of Caerau district, but there are still portions of this locality not properly supplied. The Medical Officer of Health expresses an opinion in the following words:—“It is to be hoped that the time is not distant when every house will have a constant water service.”

*Dwellings.*—Many of the oldest houses are out of repair, and the Medical Officer of Health writes:—“I reported in October, that Nos. 1, 2, 3, Edwards Court, Nos. 25, 26, 27, 28, 29 and 30, Rock street, Nos. 53, 53½, 54, 55 and 56, Bethania street, should be thoroughly repaired, and were unfit for habitation in their present condition. No. 3, Edwards Court has been repaired, and No. 2 has been closed; but the houses named are still inhabited and in the same state. Nos. 15 and 16, Rock street were reported as having no house drains, and the closet accommodation as being imperfect and injurious to the health of the occupants. Nothing has yet been done. In May I condemned the cellar dwellings (one room in each cellar) in Garw road as unfit for habitation, and advised that the brook which runs in front of the said cellars, and which contains the sewage of Alma road, should be arched over. The cellars are still tenanted and the brook uncovered.

It seems that but little, if any, attention is paid to the dwellings of the working classes at Maesteg, and as the outcome of personal inspection, I know that such is the case.

The *slaughter houses* are kept fairly clean, but most of them are inconveniently small, ill-ventilated, without proper floors and water supply. It is reported that not one of them has been constructed or is kept in accordance with the Bye-laws. A public slaughter-house, sufficiently large to serve the whole district is much needed.

The *public streets* have been kept in good order. It appears that the scavenging is fairly well performed. Attention is called to the need of ventilating the main sewer, and it is pointed out that the late Authority had ordered ventilating shafts to be fixed without delay, and that provision was to be made for the flushing of sewers.



*Disposal of Sewage.*—All the sewage of this district enters the river Llynvi. Dr. Davies writes: “Hitherto the river Llynvi has been the receptacle of all the sewage of the town, but as Caerau is becoming a populous district the discharge of sewage into the river is increasing, and it will become an intolerable nuisance.”

#### IMPROVEMENTS.

- (1) Extension of the water service to Caerau.
- (2) Sewers have been laid in Garw Road, Bridgend Road, Neath Road, and North Street.
- (3) Several streets where cesspits existed have been provided with pans and syphons and connected to the sewers.
- (4) Three houses have been closed and a few repaired.
- (5) Ivor and West Streets repaired.
- (6) An extra cart provided for scavenging purposes.

#### REQUIREMENTS.

- (1) A better water supply.
- (2) A system of sewerage and drainage carried out in such a way as to prevent the pollution of the Llynvi which now takes place.
- (3) The repair or closure of many dwellings, that in their present condition of dilapidation are unfit and dangerous to live in.
- (4) Isolation accommodation and a disinfecting apparatus.
- (5) The improvement of the following streets, viz.:—Princess Street, Duffryn Row, Grove Street, Nantyffyllon Terrace and Metcalfe Street.

The Report is *not* printed, and there is no summary of the work done by the Inspector.

**MARGAM.**

Medical Officer of Health—J. H. DAVIES, M.D.

Area in acres, 18,347.

	1891.	1894.
Population .. .. .	6,274.	7,000 (estimated).
Birth-rate, 34·5.	Death-rate, 13·7.	Zymotic-rate, 0·7.
	Phthisis death-rate, 1·7.	Respiratory death-rate, 3·0.
		Infant Mortality-rate, 15·6.

The Respiratory death-rate is somewhat high, but the others very satisfactory, and compare favourably with those for former years, and for England and Wales. Out of 103, the total deaths registered, 37 occurred in children under 1 year of age, and are attributed chiefly to injudicious feeding.

**INFECTIOUS DISEASES.**

The number of infectious cases notified under the Act was 59, as compared with 76 in the previous year, including 24 of scarlet fever (1 death), 3 diphtheria (1 death), 3 membranous croup (2 deaths), and 10 erysipelas.

Eight of the *scarlet fever* cases are attributed to importation, 13 to house-to-house visiting, the remainder could not be traced.

Two of the *diphtheria* cases were imported. The third case could not be traced, but there were no sanitary defects to account for it.

There were no cases of typhoid or puerperal fever during the year.

One case of *croup* occurred in September, and 2 in November, in three houses, all of which were in a good sanitary state. Two resulted in death.

*Small pox*.—There was no case in this district, but 1 case occurred on the s.s. "Rubina" just arrived from Huelva, this was at once removed to the Fever Hospital at Swansea. The remainder of the crew were vaccinated, and the ship was thoroughly disinfected, and the clothing and bedding burned.

*Precautions against Infectious Diseases*.—In the absence of an Isolation Hospital it seems that all the possible precautionary measures are adopted. As soon as a case is certified immediate steps are taken to isolate the patient, the children of the infected house are forbidden to attend school and to visit other houses. The Masters and Mistresses are informed of the outbreak, and cautioned that no child from the infected house be allowed to attend school without having a certificate from the Medical Officer of Health that he or she can with safety mix with the other scholars. Printed cards, supplied by the Authority, bearing the name of the infectious disease, are given to the Sanitary Inspector, which he fills up with particulars—1st, as to patient; 2nd, as to the other inmates; 3rd, as to source of infection; 4th, water and milk supplies; 5th, condition of the premises. He visits the house, examines it and its surroundings, and should any defect be discovered, immediate measures are taken to rectify the same. In no case has it being found necessary to serve a notice when defects have been found, as the verbal instructions given have always been complied with. Disinfectants are freely supplied by the Authority, and when the case is closed, the final disinfection and fumigation are usually carried out under the personal supervision of the Inspector. I have given this account of precautionary measures in full so as to induce other Authorities to do likewise in similar circumstances.

**GENERAL CONDITIONS.**

In the village of Taibach, and at Port Talbot, Penycae, Groes, Margam, and Oakwood, the supply of water from the Authority's mains is ample for all purposes. The portions of the district at present without a supply of water for domestic purposes are situated at Mynyddbychan and Penybryn. The question of providing a supply for the latter district is now receiving the attention of the Council, who will, doubtless, in the near future carry out a scheme for the supply of the district.

*Inspections*.—During the year 890 dwellings and schools were inspected, with the result that 84 nuisances arising from (1) structural defects, (2) houses unfit for habitation, (3) overcrowding, and (4) dirty houses were found to exist, and have since been abated.

The *collection* and *disposal* of refuse is satisfactorily done.

Special attention has been paid by the surveyor to *dairies and milkshops*, with the result that 39 inspections were made, and 10 nuisances, arising principally from want of proper cleansing and lime-washing of premises were found to exist. Notices for the abatement of these nuisances were served, and all properly complied with. The Surveyor deals at length with the *cowsheds*, and writes:—"The greater number of the cowsheds occupied by persons engaged in the milk trade, are of the most primitive description, and were built in connection with the various farms upon which they are situated, many years before the coming into operation of any Orders or Regulations with regard to their construction and requirements. Their principal defects arise from (1) The want of the proper amount of cubic space for the number of animals kept. (2) Means for the proper lighting and ventilation. (3) The bad construction of the floors. (4) The almost universal practice of storing fodder intended to be used for food for the cattle upon stages over them. During the year 81 inspections were made, 19 notices were served, 2 cowsheds were re-built, and structural defects in 2 others remedied, and 15 nuisances arising from various causes were abated.

#### IMPROVEMENTS.

(1) *Water Supply*.—The extension of the water mains at Port Talbot. The supply for Oakwood has been made efficient. The contracts have been let for carrying out the scheme of water supply for Bryn, Ynysygwas, Mynyddbychan, and Penhydd Waelod. A loan of £1,200 has been sanctioned by the Local Government Board.

(2) *Sewerage and Sewage Disposal*.—Improved automatic flushing tanks have been substituted for some of the old ones, and they are found to act admirably. The whole of the egg-shaped sewer running through Taibach has been cleaned, repaired, and is now thoroughly flushed. A 12-inch main has been laid in Tir Caradoc Road at Port Talbot and Penycae districts. Sewer gratings have been removed and ventilating shafts constructed, which do away with the nuisances complained of.

A loan of £1,418 has been sanctioned by the Local Government Board for the extension of the Drainage of new streets at Port Talbot.

(3) *Summary of the Surveyor and Inspector's year's work* ;—

Total number of inspections made	..	..	..	..	2,540
" " Inspector's notices served	..	..	..	..	188
" " Legal " "	..	..	..	..	2
" " Nuisances abated	..	..	..	..	443

#### REQUIREMENTS.

- (1) Isolation hospital.
- (2) Disinfecting apparatus.
- (3) Public baths.
- (4) Refuse destructor.
- (5) Printed handbills giving rules for the feeding of infants.
- (6) Add measles and whooping cough to the notifiable diseases.
- (7) The framing of bye-laws as to paving of yards, sec. 23 Public Health Acts (Amendment) Act, 1890.
- (8) Making of bye-laws to enforce periodical cleansing of cesspools, earth and pail-closets, under section 44, Public Health Act, 1875.
- (9) That the bye-laws relating to nuisances be extended so as to provide for the mode of construction, and the materials to be used in buildings in which animals are kept.
- (10) That the Council take into consideration the desirability of enforcing the laying of a separate water supply to each house in the district where practicable.

#### REMARKS.

Appended to the Medical Officer's Report is another exhaustive report by Mr. Bishop, the Surveyor and Inspector, giving a full account of a vast amount of good work done by this officer.

**MERTHYR.**

Medical Officer of Health—THOMAS J. DYKE, F.R.C.S.

Area in acres, 17,714.

	1891.	1894.
Population .. ..	58,080 .. ..	65,579 (estimated).

Total number of occupied houses, 12,041.

Birth-rate, 35·1. Death-rate, 19·8. Zymotic-rate, 3·0. Infant Mortality-rate, 186.

Phthisis death-rate, 1·3. Respiratory death-rate.

The birth-rate is 2 per 1,000 less than in 1893. The number of illegitimate births was 81—2·5 per cent. of the whole. The death-rate is less by 2·5 per 1,000 than in 1893, and is the lowest recorded for 29 years. Out of the total 1,300 deaths registered, 429 were the deaths of children under 1 year of age, and 207 of 1 and under 5 years. This amounts to 636, or 49 per cent. of all deaths. The sum of the years lived by those whose deaths were recorded, divided by the number of deaths, gave 25 as the average age at death, as compared with 17·5 in the dark days of former Merthyr.

**INFECTIOUS DISEASES.**

*Notifications.*—The number of the cases of infectious maladies reported during the year was 530, as compared with 993 in 1893, 1,030 in 1892, and 1,087 in 1891.

The number of cases notified as suffering from each malady, and the deaths resulting therefrom was:—

	Cases.	Deaths.
Small Pox .. ..	1 ..	0
Scarlet Fever .. ..	211 ..	11
Diphtheria .. ..	47 ..	11
Typhus Fever .. ..	5 ..	2
Enteric Fever .. ..	146 ..	19
Erysipelas .. ..	99 ..	6
Puerperal Fever .. ..	8 ..	3
	<hr/>	<hr/>
	530	57
Measles .. ..		24
Whooping Cough .. ..		54
Diarrhœa .. ..		75
		<hr/>
Total .. ..		210

*Scarlet Fever* was very much less generally prevalent; 211 children were affected, as against 595 in 1893.

*Diphtheria.*—47 persons were affected; 28 of these lived at Pontyscallog. The total deaths were 4. In every instance which occurred, a local cause, either imperfect drain traps or broken closet-pans, were discovered.

*Typhoid Fever* was more than usually prevalent in certain localities. In the occurrence of this malady also imperfections of the sanitary appliances in closets, yards and drains were in *every instance* discovered, and the use of the smoke test very quickly indicated whence the sewer gases escaped.

*Typhus Fever* was imported from Herefordshire in the persons of two hop-pickers. Two females who attended on them during the very brief time before their removal to the fever hospital suffered, and a nurse at the hospital. The sick were speedily removed to the hospital, and the disinfection of the clothing and the



fumigation of the infected was performed so efficiently by the Inspector that there was no spread of the infectious malady.

*Erysipelas*.—The cases were numerous, and the face in nearly all instances was the part affected. No spread of the disease to other occupants of the house were reported.

*Puerperal Fever*.—A certain number of cases have occurred, but it has not given any indications of being spread by contagion.

Of *Measles* and *Whooping Cough* Dr. Dyke writes—"Measles and whooping cough are quite as amenable to *preventive treatment* so successfully adopted against the spread of scarlet fever. I mean, of course, the forbidding children affected by either malady, or any scholar from the infected house, attending a school for children. Bearing in mind, on the one hand, the enormous mortality from these two diseases, on the other the great loss to schools by the excessive number of young children simultaneously affected during an epidemic of either of these ailments, it would, I feel sure, be economy of money to enforce the absence of any infected child, and an immense saving of child life by requiring notification of all cases, by requiring parents, under penalty, to keep their children at home, and by enabling school managers to claim payment for absentees under the terms of article 101 of the code."

Dr. Dyke very wisely calls the attention of the Authority to a mode of *propagation of tubercle* which comes within the cognisance and duty of Sanitary Authorities—that the flesh of animals, if eaten uncooked, may be the means of spreading the germs of tubercular disease to those who eat it, and he considers it incumbent on Sanitary Authorities to ensure to the public that the animals slaughtered for human food should be ascertained to be free from this disease.

Again, Dr. Dyke writes of *milk from tuberculous cows* thus—"The milk of a tuberculous cow taken as food by a suckling child can, and alas often does, deposit in the system of the infant (the darling of its parents) seeds of this most destructive malady, for the milk so drawn from a diseased animal contains the germs of the malady in most readily absorbed form." Dr. Dyke believes that cows used for the provision of milk should be certified by skilled Veterinary Surgeons to be free from *tubercle*.

*Merthyr and Dowlais Fever Hospitals*.—The number of patients received during the year was 23 at the Pant Hospital, Dowlais; and 20 at the Brecon Road Hospital, Merthyr, and of these 52 cases, 8 died. A small Fever Hospital, situated between Troedyrhiw and Treharris is greatly needed.

## GENERAL CONDITIONS.

Particulars as to *statistics, water-supply, drainage, rainfalls, &c., &c.*, are given for each district separately and in detail.

*Inspection of districts, and nuisance removal*.—Dr. Dyke calls attention to the necessity of making periodical and systematic inspection of the whole district, and states that the labour incident to the due fulfilment of these duties has yearly become more onerous. The works of sewerage and house drainage have now been in operation more than a quarter of a century, and as these works are of a character which tend to become more and more imperfect, it has resulted that disease, notably Typhoid and Diphtheria, affect residents in houses where the drains and sanitary arrangements have been found by the Inspector to be imperfect. And further it is pointed that as time goes on these works will become more and more insanitary, and hence the necessity of early and prompt discovery and removal of imperfections and nuisances. In concluding his remarks under this heading Dr. Dyke writes: "I beg earnestly to direct your attention to this matter, believing that by adequate assistance you may be able to discover imperfections, and by proper structural means, under the guidance of your surveyor, *prevent* many cases of the sicknesses I have named occurring, and save many lives."

*Water Supply*.—The water supply has been duly watched and its purity ascertained. The provisions sought by a Bill before Parliament for an increase in the storage reservoirs will, when obtained and the works executed, be a great boon to the inhabitants of the parish and district.

The *Common Lodging Houses*, under the supervision as to cleanliness and overcrowding, of Superintendent Thorney, are stated to have been frequently visited by Dr. Dyke and the Inspector. There are 6 licensed houses in Merthyr and 2 in Dowlais.

The *sewerage irrigation areas* at Troedyrhiw and Berwyddy are reported to be in due and proper cultivation.

*Rainfall.*—Below is recorded the rainfall at three different stations, whose altitudes above sea level are given.

	Elevation above sea.	Total Rainfall.
Pentwyn Reservoir ..	1,300 feet. ..	72·24 inches.
Brynteg, Merthyr ..	685 „ ..	58·83 „
Pentrebach, Merthyr ..	497 „ ..	65·22 „

*Dairies, Cowsheds and Milkshops.*—It is stated that there are probably from 450 to 500 cowsheds in use, where milch cows are kept within the district of the Board. It is pointed out that it is impossible for the *one* Inspector to supervise these cowsheds and attend to his other all-important duties. Public notices under the *Dairies, Cowsheds and Milkshops Order* have been printed and issued, urging all cowkeepers to apply for registration. Only few, however, have made such applications. Dr. Dyke concludes his observations thus:—“Bearing in mind the number of maladies which are conveyed by impure milk, knowing as you do the quantity used in preparing the food of young children (the workmen and ratepayers and voters of 20 years hence), you will, I hope, give a thought to, and take some action in the matter.”

#### IMPROVEMENTS.

These are not specified in the Report.

#### REQUIREMENTS.

These are not distinctly specified, but generally they may be summarised thus:—

- (1) More Sanitary Inspectors are required. At present the whole work devolves upon one. A regular and systematic inspection of the whole district should be made at certain intervals, with a view of detecting the many dwellings that are said to be unfit for human habitation, and for the discovery of nuisances which should be abated.
- (2) The remedying of many imperfections in the sewerage of the lower part of Dowlais.
- (3) The sewerage of Pantyscallog, Plantation square, and Ash road, Pontyrhun.
- (4) The provision of means to allow the escape of sewer gases at the highest positions of the sewers, and their regular flushing at every terminal.
- (5) Plantation street, Penydarren, Old Company's houses (upper and lower), and Crystal Palace, court call for improvement.
- (6) The repair or closure of some hundreds of old and dilapidated dwellings on the banks of the Taff river in Tydfil's Well division and elsewhere.
- (7) An additional Fever Hospital between Troedyrhiw and Treharris.
- (8) The making of regulations under the *Dairies, Cowsheds and Milkshops Order*, and the registration and inspection of dairies and cowsheds.

**MOUNTAIN ASH.**

Medical Officer of Health—E. P. EVANS, M.R.C.S., L.R.C.P.

Area in acres, 10,554.

	1891.	1894.
Population .. ..	17,495.	20,976 (estimated).
Birth-rate, 42·7.	Death-rate, 20·9.	Zymotic-rate, 1·9.
		Infant Mortality-rate, 174.
	Phthisis death-rate, 0·9.	Respiratory death-rate, 5·8.

The birth-rate is exceptionally high, as also are the general and respiratory death-rates, which compare very unfavourably with those for 1893, for other urban districts and for England and Wales.

**INFECTIOUS DISEASES.**

188 cases of infectious sickness were notified, comprising 92 scarlatina, 4 diphtheria, 8 membranous croup, 58 typhoid fever, 4 puerperal fever, and 22 erysipelas. 12 typhoid fever patients were removed to the Isolation Hospital, and all discharged convalescent.

*Typhoid fever* seems to be endemic in the district. During the first quarter 32 cases were notified, 10 in the second, 9 in the third, and 7 in the fourth—they are attributed to local conditions, such as *defective drains*. No other particulars are given.

*Scarlatina*.—17 cases happened in the first quarter, 4 in the second, 43 in the third, and 28 in the fourth. Most of the cases notified during third quarter were at Ynysybwl and Aberdare Junction, during the fourth quarter they were distributed over the district.

Of the 4 cases of *diphtheria*, 3 occurred at Aberdare Junction. No particulars of the other infectious cases is given, and with the exception of giving the number of the puerperal fever and erysipelas cases, nothing more is said of them.

**GENERAL CONDITIONS.**

Defective drains are common, and to them many of the Typhoid fever cases are attributed.

The *slaughter and bake-houses* were examined by the Medical Officer of Health, and all found in a satisfactory condition. He also visited several dwellings reported to him as unfit for human habitation, and ordered the defects to be remedied.

Attention is called to *over-crowding*, as seriously affecting the health of the inhabitants. This condition is stated to be due to the want of more cottages.

The district is well supplied with water of good quality, and a new service reservoir has been provided for Aberdare Junction, and gives an ample supply. The Medical Officer writes:—"The sanitary condition of the whole district at the end of the year was satisfactory."

**IMPROVEMENTS.**

- (1) A supply of water for Aberdare Junction.
- (2) Several houses unfit for human habitation have been rendered habitable.

**REQUIREMENTS.**

More cottages.

This report is *not* printed.



## OYSTERMOUTH.

Medical Officer of Health—J. BEVAN, M.B., C.M.

Area in acres, 2,615.

		1891.			1894.
Population	..	3,598.	..	..	4,060 (estimated).
Birth-rate, 20.2.	Death-rate, 14.04.	Zymotic-rate, 0.98.	Infant Mortality-rate, 1.11.		
	Phthisis death-rate, 0.4.	Respiratory death-rate, 2.4.			

These rates are satisfactory.

## INFECTIOUS DISEASES.

Sixty-three cases of infectious sickness were notified, consisting of 52 cases of scarlatina, 2 diphtheria, 6 typhoid or enteric, and 3 of erysipelas, and resulting in 1 death from scarlatina, and 2 from typhoid fever.

During the year there were 52 cases of scarlatina, the first case happened in January, and the epidemic that followed was due, in the opinion of Dr. Bevan, to the spread of the infection from this first case. At first the disease was limited to Southend, and then spread to Hall Bank, Village Lane, Thistleboone, Norton, Bay Street, and lastly Clement's Row—one case terminated fatally. Every precaution was taken to prevent the spread of the infection. Parents living in infected houses were cautioned not to send their children to school, but in spite of all the schools were a source of the spread of the disease, and, it was found in several cases, that children had been attending school while suffering from scarlatina, and medical aid only called in when dropsy supervened. Dr. Bevan, writes, "Until an Isolation Hospital is provided for the district, all other precautions to prevent the spread of infection will be found disappointing."

The two cases of *diphtheria* occurred on Caswell Hill.

*Typhoid fever*.—Six cases and two deaths, one case is attributed to *defective drainage*, and two to polluted water derived from a defectively stined well sunk in a garden which was manured with the contents of the closets.

In every instance *disinfection* was practised by using sulphur, and in a few instances the bed and bedding were disinfected in the Swansea apparatus. Dr. Bevan impresses upon his Authority the importance of having the disinfection carried out by an Officer of the Authority.

## GENERAL CONDITIONS.

The *water supply* is reported as having been more satisfactory than it has hitherto been. Seventy house connections were made, and the mains have been extended to Norton. A less intermittent supply is very desirable. Part of Norton and George Bank are not yet properly supplied. Two wells were condemned during the year.

*Drainage*.—No extensions of the mains have been made. Dr. Bevan remarks—"No extension of the mains has been made during the year. Considering the number of houses that have been lately built in the valley under Newton and in the direction of Langland (all of which drain into cesspits), it is necessary that the system of drainage should be extended in these directions."

The removal of excrement, &c., from pails, closets and middens has been carried out satisfactorily.

*House Accommodation*.—Thirty dwelling-houses were built and three shops; two houses were condemned as unfit for human habitation, one of which has since been demolished. Three cases of overcrowding were remedied.

*Dairies and Cowsheds*.—There are 20 cow keepers and 23 cowsheds, the average space for each cow being 788 cubic feet. With two exceptions none are registered, but as a rule they are kept clean. There are four dairies properly so called in the district—they are clean, lined and properly ventilated.

*Slaughter Houses*.—Five in all; with one exception none of them meet the requirements of the Public Health Acts. One was condemned. They are cleanly kept.



*Rainfall.*—The total rainfall taken at Newton by the Rev. Secretan Jones, 280 feet above sea level, was 52·35 inches ; the average yearly rainfall for the last nine years being 41·70 inches.

#### IMPROVEMENTS.

The improvements effected have not been extensive. The Waterworks Company have extended their mains to part of Newton. Also the outfall of the open sewer at the top of Newton Hill has been covered in.

#### REQUIREMENTS.

(1) A thoroughly efficient water supply (the present reservoir at Newton is not large enough, and should be enlarged, or better, a second one constructed).

(2) An extension of the system of drainage.

(3) An Isolation Hospital.

(4) A Public Slaughter House.

(5) The open sewer at Newton, which in dry weather is a nuisance, should be improved.

(6) The adoption of the Public Health Acts (Amendment) Act, 1890.

The Report is *not* printed.

**PENARTH.**

Medical Officer of Health—RICHARD F. NELL, M.R.C.S., L.S.A.

Area in acres, 2,507.

	1891.	1894.
Population .. ..	12,000 .. ..	13,500 (estimated).
Birth-rate, 30·3.	Death-rate, 8·6.	Zymotic-rate, 0·7
	Phthisis death-rate, 0·8.	Infant Mortality-rate, 66.
		Respiratory death-rate, 1·4.

All the death-rates are very satisfactory.

**INFECTIOUS DISEASES.**

Forty-three cases were notified—including 11 scarlet fever, 13 diphtheria (4 deaths), 6 typhoid fever (1 death), 8 erysipelas (1 death), 4 membranous croup (4 deaths), and 1 puerperal fever (1 death). There were also registered 3 deaths from whooping cough and 1 from diarrhoea.

*Diphtheria* was the chief zymotic disease noticed during the year, and its existence is attributed to insanitary conditions—defective drainage or soil.

There was a great decrease in the number of cases of *scarlet fever* notified as compared with 110 in the previous year.

*Typhoid Fever*.—The cases notified were 6 as compared with 22 in 1893. Dr. Nell writes, “These cases must either have been imported or have been due to some defect in the house drainage.”

**GENERAL CONDITIONS.**

The year was characterised by a very low mortality, and a marked absence of any serious disease.

No special action became necessary in dealing with any insanitary condition arising during the year.

The *water supply* was good, plentiful, and continuous.

The cleansing of streets and back lanes has been better performed.

**IMPROVEMENTS.**

The completion of the outfall sewer on the beach to low-water mark.

**REQUIREMENTS.**

(1) The more strict enforcement of the building bye-laws, and the drains of new houses should, in every instance, be carefully tested before a certificate is given that the houses are fit for occupation.

(2) An isolation hospital, disinfecting apparatus, and ambulance van.

**PONTYPRIDD.**

Medical Officer of Health—HOWARD DAVIES, M.R.C.S., L.S.A.

Area in acres, 8,000.

	1891.	1894.
Population .. .. .	19,971.*	35,672 (estimated).

Birth-rate, 30·8. Death-rate, 15·5.† Zymotic-rate, 1·9. Infant Mortality-rate, 181.

Phthisis death-rate, 1·2. Respiratory death-rate, 3·2.

The birth rate is less by 8 per 1,000 than in 1893. Of the total deaths registered, 289 were caused by the Albion Colliery accident, Cilfynydd. 82 persons died at the Pontypridd Union Workhouse, and out of this number 52 were from without the district. Both these numbers, making a total of 341, are excluded from the number of deaths on which the above rate is based. This favourable death rate is attributed to the improved sanitation of the district generally. 58 per cent. of all deaths were those of children under 1 year of age, which is very high. Of persons aged 65 and upwards, the proportion was 12 per cent. The infantile mortality is also very high.

**INFECTIOUS DISEASES.**

128 cases of infectious sickness were notified, as compared with 392 in 1893. The following table gives the number notified during each month :—

MONTH.	Scarlatina.	Diphtheria.	Croup.	Erysipelas.	Puerperal Fever.	Typhoid Fever.	Total.
January .. .. .	15	1	..	5	..	4	25
February .. .. .	5	..	..	1	2	1	9
March .. .. .	5	..	..	2	..	3	10
April .. .. .	1	..	..	1	..	1	3
May .. .. .	5	..	1	3	1	3	13
June .. .. .	1	..	..	2	..	1	4
July .. .. .	1	..	..	1	..	1	3
August .. .. .	12	..	..	..	..	..	12
September .. .. .	8	1	1	..	..	3	13
October .. .. .	6	..	..	2	..	6	14
November .. .. .	2	1	..	..	2	4	9
December .. .. .	7	..	1	..	..	5	13
Total .. .. .	68	3	3	17	5	32	

\* In the year 1893 the area of this district was very considerably increased.

† Including the 289 deaths occasioned through the Albion Colliery accident, the death rate becomes 23·6.

As compared with those in 1893 :—

	1893.	1894.
Scarlatina .. .. .	222	68
Diphtheria .. .. .	11	3
Croup .. .. .	3	3
Erysipelas .. .. .	19	17
Puerperal Fever .. .. .	2	5
Typhoid Fever.. .. .	135	32
	<hr/>	<hr/>
	395	128

In 1893 the Zymotic death rate was 4·4 (very high), as compared with 1·9 (England and Wales 1·76).

*Measles* was accredited with 13 deaths. The complaint was mostly prevalent amongst children attending the Catholic schools, at Treforest and Cilfynydd. The schools were closed for two weeks and the disease stamped out.

*Whooping Cough* occasioned 28 deaths and was very prevalent.

*Scarlatina* was less prevalent ; 68 children as compared with 222 in 1893, suffered.

*Enteric or Typhoid Fever*.—32 cases were notified and 6 proved fatal, as compared with 135 cases and 16 deaths in 1893. The distribution of the fever was as follows :—Cilfynydd Ward, 1 ; Graig Ward, 2 ; Rhondda Ward, 3 ; Trallwn Ward, 2 ; Treforest Ward, 24. The Medical Officer of Health writes :—“ In the Treforest Ward the cases, though numerous, did not occur at any one particular spot, but one here and there in different parts of the district. The infection could not be traced to any one definite source. In Treforest proper, the disease was associated with foul and defective drainage in Forest road, Castle court, Park street and Long row. The same remark would apply to Rhydyfelen and Upper Boat, where in addition, access was easily obtained to wells, which from their very situation, immediately below the level of and adjacent to the Glamorganshire canal, must not be considered above suspicion.”

*Diarrhoea*.—The year was remarkable for the diminution in the number of cases of Diarrhoea, 7 cases only proving fatal, as against 43 in 1893.

#### GENERAL CONDITIONS.

*Scavenging*.—The district is in need of a better system of scavenging than that in vogue at present, and the plan adopted of letting out the several districts by contracts is far from being satisfactory. The manner in which the refuse is disposed of is described as “ not only objectionable but positively dangerous to the health of the inhabitants.” The erection of a “ Refuse Destructor ” is again, as on previous occasions, strongly advocated, and the Medical Officer of Health considers that the time has arrived when the Council should themselves undertake the scavenging, for by so doing the work will be more thoroughly done, as the men would be more directly under the control of the officers of the Council.

Of the *water supply* the Medical Officer of Health writes :—“ I regret the necessity of having to complain from year to year of the inadequacy of the supply of water to your district, as supplied by the Pontypridd Waterworks Company. The water supply of this rapidly increasing community is the very gravest one that your Council will have to deal with immediately. It is a serious matter to think that an important district like this is being trifled with in such a lackadaisical manner by a Company whose duty it is to fulfil such important obligations to the public. I fail to see how this Company can possibly supply this district with a sufficient quantity of water. There is a scarcity already ; they do not augment their supply, but, on the other hand, they have recently extended their mains to other districts beyond this, viz., to Nantgarw, Taff's Well, and Tongwynlais.”

The question of providing an *Isolation Hospital*, a *Disinfecting Apparatus* and *Ambulance* is said to be engaging the serious attention of the Council, and the hope is expressed that the matter will be definitely settled during the present summer.



## IMPROVEMENTS.

The Public Abbattoir was completed and formally opened during the year. The Medical Officer of Health remarks:—"Looked at in a sanitary sense only, the Public Abbattoir will prove to be a blessing to the health of the community generally."

24 houses defective in structural and sanitary arrangements have been repaired, and 4 condemned as unfit for human habitation.

Respecting the subsidiary sewers, Mr. Rees, the Surveyor, supplies the following statement:—

Length of subsidiary sewers	..	..	..	22 miles
Cost of subsidiary sewers up to date	..	..	..	£28,000
Houses not yet connected with main sewers	..	..	..	532

## REQUIREMENTS.

- (1) An Infectious Diseases Hospital, a Disinfecting Apparatus and Ambulance.
- (2) A Refuse Destructor and a better system for the collection and disposal of refuse.
- (3) A Public Mortuary, Public Lavatory and Latrine Accommodation, together with an Asphyxiator for testing the drains.
- (4) More water.
- (5) The provision of subsidiary sewers in those portions not yet connected with the mains.

## PORTHCAWL.

Medical Officer of Health—R. T. WILLIAMS, L.R.C.P., L.R.C.S.

Area in Acres, 3,365.

		1891.			1894.
Population	.. ..	1,673	.. ..	.. ..	1,800 (estimated.)
Birth-rate, 22·2.	Death-rate, 15·1.	Zymotic-rate, 0·6.	Infant Mortality-rate, 225 .		
	Phthisis death-rate, 0·6.	Respiratory death-rate, 2·1.			

The various mortality rates, except the infantile, are very satisfactory.

Of the 28 deaths registered, 9 were those of children under 1 year of age.

### INFECTIOUS DISEASES.

Two cases of *Scarlatina*, 1 of *Puerperal Fever*, and 3 of *Erysipelas* were notified. A careful enquiry was made as to the origin of the scarlatina cases, but they could not be traced. Every effort was made to prevent the infection from spreading by isolating the cases as far as practicable, and also by the free use of disinfectants. The Infectious Disease Notification Act has been adopted, but its provisions are not enforced. The Medical Officer of Health writes :—" I would impress upon you, as I have already done upon the late Local Board, to see that the Infectious Disease Notification Act be at once adopted and put into force. The late Board passed a resolution to this effect, but matters were allowed to remain in that state. I cannot too strongly impress upon you the importance of adopting this act, as in the case of a watering place like Porthcawl especially, it is most desirable that every case of infectious disease should be immediately reported, and the necessary steps taken to prevent the infection from spreading."

Autumnal Diarrhœa was practically absent, and there has been no cases of Typhoid Fever.

### GENERAL CONDITIONS.

The *water supply, drainage and sewerage*, and the *method of the disposal of sewage* are unsatisfactory. Drains are badly needed in South Road, which, after heavy rain, is almost impassable. The M. O. H. writes—" A complete system is more needed now than at any time. New houses are being constantly built, and the inevitable large cesspool at the rear, and at the present rate we shall soon have a town riddled with cesspools (very often allowing their contents to soak to the soil), which will have to be periodically cleansed at very great expense and inconvenience, and possibly danger also. Such a state of things I need hardly tell you is very unsatisfactory and very unpleasant to contemplate, and, if a complete system of sewerage is not adopted, I do not see that you have anything else to expect, and no place can claim to be an ideal health resort with such a state of things existing."

The *scavenging* on the whole is said to have been performed better than in the previous year, and larger quantities of refuse are removed from the neighbourhood of dwellings. The Council is strongly advised that a yearly contract would be far more efficacious than the present unsatisfactory system of paying by the hour. The district as a whole presents a cleaner appearance, but the condition still remains unsatisfactory, and especially so during wet weather.

The total rainfall during the year at the " Rest " Convalescent Home was 42 inches as compared with 31·9 inches in 1893.

### IMPROVEMENTS.

The only improvements of any importance effected during the year have been :—

- (1) The extension of the sewer (which formerly discharged on the beach) to below low-water mark.
- (2) Drains to carry away surface water in John Street.
- (3) The cleansing out of a great many cesspools, some of which contained the accumulation of years.
- (4) 4 urinals have been erected, but not supplied with water for flushing purposes.

## REQUIREMENTS.

- (1) A good and plentiful supply of water.
- (2) A complete system of sewerage.
- (3) Drains for carrying off surface water from South Road.
- (4) The adoption of the Notification Act, 1889.
- (5) The framing and enforcement of Regulations under the *Dairies, Cowsheds, and Milkshops Order*.
- (6) More attention to the condition of roads, and to the farmyards at Nottage.

The report is *not* printed, and there is no statement of the work done by the Surveyor and Inspector.

**YSTRADYFODWG.**

Medical Officer of Health—J. R. JAMES, M.B., M.R.C.S.

Area in acres, 23,543.

		1891.		1894.
Population	.. ..	88,350	.. ..	109,820 (estimated).
Birth-rate, 33·8.	Death-rate, 15·5.	Zymotic-rate, 0·7.	Infant Mortality-rate, 203.	
Phthisis death-rate, 0·8.		Respiratory death-rate, 3·5.		

All the mortality rates are considerably lower than those for 1893, and they compare favourably with those for England and Wales, and with those for urban districts in general. The deaths of children under 1 year of age accounted for 43·3, and of those under 5 years to 26·9 per cent. of the total deaths. The general death-rate for the different localities was as follows :—

Llwynpia	.. . .	12·41	Pandy	.. . .	15·99
Ystrad	.. . .	13·80	Porth	.. . .	16·34
Treherbert	.. . .	14·75	Ferndale	.. . .	18·4
Hafod	.. . .	15·33	Treorky	.. . .	18·66
Tylorstown and Ynyshir	.. . .	15·67	Maerdy	.. . .	21·84

The high death-rate of Maerdy is attributed to its high elevation (966 feet) above sea level, and to its exposure to east and north winds.

**INFECTIOUS DISEASES.**

1,032 cases of infectious diseases were notified during the year, comprising, 2 smallpox, 441 scarlet fever, 12 diphtheria, 19 membranous croup, 155 typhoid fever, 6 continued fever, 17 puerperal fever, 22 erysipelas, and 358 of diarrhœa. Out of these 2 small pox and 20 typhoid cases were treated in the Infectious Diseases Hospital.

*Scarlatina and Measles* were present during the year, but not in an epidemic form.

Twelve sporadic cases of *diphtheria* were reported—all occurred in the Rhondda Fawr Valley.

*Typhoid fever.*—Under this heading it will be well to give the words of the Medical Officer of Health—"In the year 1893, we had typhoid fever in an epidemic form in Llwynpia, in Heolfach, and in Treorky, and if it could be any comfort for us, the Registrar General's Annual Report draws attention to the very large increase in enteric fever mortality during 1893, the rate for that year having been higher than in any previous since 1884. The favouring conditions leading to this increase were undoubtedly climatic, whilst in 1894, the greatest number of enteric fever, 66 occurred in No. 5 district and Tylorstown. A place that was fairly free from the disease in 1893, had the greatest number of cases, and two-thirds of these cases could be traced to broken drain traps, and drain traps that were not gas-tight in the houses belonging to the S.W. side of East Road, Tylorstown. The fever prevailed the most where the retaining wall is as high as the eaves of the houses, and within 3 feet of the same, thus boxing in any sewer-gas emanations, the living room and the pantry being the easiest way of escape for this imprisoned foul air."

The 2 small pox cases were imported; both were treated in the hospital, and both recovered, and the disease did not spread.

**GENERAL CONDITIONS.**

*Main sewer.*—It is reported that the following places are now practically connected with the sewer:—Hafod, Britannia, Porth, Gwymmer, Penygraig, Clydach Vale, Llwynpia, Gelli, Ynishir, and *part of* Ystrad, Treorky, Treherbert, Cwmpark, Ferndale, Maerdy, and Tylorstown. The connections for Pontygwaith, Wattstown, Ferndale, and Pentre, are to be proceeded with immediately.

*Water supply.*—The district is somewhat better provided with water storage than formerly. The Ystrad Gas and Water Company have provided a Storeage Reservoir equal to 8 days supply, *i.e.* about 8 million gallons.



It is also reported that the Pontypridd Water Company are providing for the construction of a Storage Reservoir of the capacity of 20 million gallons.

Dr. James again strongly advises the Ystrad Gas and Water Company to have the main "Intake" removed above a source of filth contamination, viz., the Blaen-Rhondda coal levels. He further writes—"The assurance of water analysis as to the purity of water supply is a very doubtful comfort to those who have seen the same supply tainted with human filth. But the future water supply of your district is, I know, an anxious thought with your Council, for when the present catchment area is excavated for coal, another catchment area should be ready for collection."

*Cellar Dwellings.*—Dr. James is of opinion that there does not exist within the whole district a single cellar dwelling which is in accordance with the Public Health Acts. This subject has been considered by the late Board, and a resolution has been passed to close *permanently any* and *every* cellar dwelling in which a case of filth fever occurred. All cellar dwelling owners should be made aware of this resolution, and the Council is asked to uphold it.

*Private Improvements.*—The happiest item to report upon is the prospect of the wealthy land owners of the district assisting their tenants to form and make the various streets that have so long disgraced the district.

*Isolation Hospital.*—The question of providing increased accommodation for the reception and treatment of patients suffering from infectious sickness is said to have been considered by the Council, and on several occasions eligible sites for an additional hospital have been inspected, but so far without fixing upon one. Attention is also called to the desirability of procuring an efficient steam disinfecting apparatus, and the Council is strongly advised to provide the best that can be procured, whatever the initial cost and the continued outlay may be.

#### IMPROVEMENTS.

These are not specified.

#### REQUIREMENTS.

These are not specified.

#### REMARKS.

The Report is printed, and appended is a statement from each of the five Inspectors of the work done by them. Table C has not been returned.

# RURAL DISTRICTS.

## BRIDGEND AND COWBRIDGE (Bridgend Division).

Medical Officer of Health—WYNDHAM RANDALL, M.R.C.S., L.R.C.P.

Area in acres, 40,023.

	1891.	1894.
Population .. ..	14,126	14,661 (estimated).
Birth-rate, 29.	Death death-rate, 13·0.	Zymotic-rate, 0·8.
	Phthisis death-rate, 0·8.	Respiratory death-rate, 2·4.
		Infant Mortality-rate, 126.

The 104 deaths which occurred among a population of 1,362, at the Lunatic Asylum, were not included in the total deaths on which the above mortality rates are based.

### INFECTIOUS DISEASES.

The total number of notifications was 93—22 scarlet fever, 7 diphtheria, 2 membranous croup, 35 enteric fever, 5 continued fever, and 22 erysipelas. The notifications for 1893, numbered 128. One case of diphtheria, 2 membranous croup, and 7 of typhoid or enteric fever proved fatal.

*Typhoid fever.*—This filth disease has reaped a good harvest in this district—4 cases occurred in the first quarter, viz., 2 in the Western, 1 in Maesteg, and 1 in Ogmore divisions. During the second quarter, 4 cases in Western, 2 in Central and 1 in Ogmore divisions. During the third quarter, 4 cases in Western, 14 in Central divisions. And during the fourth quarter, 3 cases in Western, and 2 in Central divisions.

During the third quarter the small village of Coychurch suffered most severely from this scourge—13 cases were notified, and one terminated fatally. The spread of the fever is attributed to polluted water obtained from an unprotected road-side well, which has since been closed. Instructions as to disinfection of motions and clothes were given at all the infected houses and disinfectants supplied. (This is not enough surely).

The Board School at Coychurch was closed from the 5th February until 1st March, in consequence of an outbreak of mumps; 48 houses out of 60 being infected, and only 12 children attending school.

### GENERAL CONDITIONS.

Judging, so far as is possible from the Report, the district, although it can boast of a very low death rate for the year, is in a most insanitary condition. Park terrace, Tondy, is described as much in the same state as it was in 1886—9 years ago. To quote the words of the Report. “On the North side huge cesspools filled with liquid filth, seldom cleansed out, and in the gardens pigstyes with, in some cases, the fall of the ground towards the houses; thus surface pollution from them at times of rain, is washed down in the direction of the dwellings.

*Nuisances* are common on all sides, in fact the Report is full of them.

*Water Supply.*—Coity, St. Bride's Major, Southerndown, Pencoed, Aberkenfig, Tondy and Kenfig Hill are inadequately supplied. An attempt to provide a water supply for St. Bride's Major and Southerndown has failed, owing to the cost of the undertaking.

Plans for the *Sewerage* of Aberkenfig and Tondy, in conjunction with the Bridgend Urban District, have been submitted for the approval of the Local Government Board, but without any result. This much needed improvement has now been left in abeyance owing to the refusal of landowners to state the amount claimed for way-leave.

## IMPROVEMENTS.

There are good reasons for believing that these are very few, and no list of them is given; but gathering from the Report it appears that :—

- (1) The scavenging of Aberkenfig and Tondy was undertaken by the Authority before the end of the year.
- (2) A well at Coychurch was closed and subsequently cleansed, but its water upon analysis was found unfit for drinking purposes.

No other improvements are specified.

## REQUIREMENTS.

- (1) Water supply for Coity, St. Bride's Major, Southerndown, Pencoed, Aberkenfig, Tondy and Kenfig Hill.
- (2) Sewerage schemes for Pencoed, Aberkenfig, Tondy and other localities.
- (3) Provisions for Isolation and Disinfection.
- (4) The advisability of depositing all plans for new buildings with the Authority Surveyor, who should see that they are carried out accordingly.
- (5) A systematic house-to-house inspection of the whole district at certain intervals.
- (6) The desirability of employing competent or experienced persons to carry out the disinfection of dwellings, bedding and clothing, acting under the supervision and guidance of the Medical Officer of Health.

There is *no* statement of the work done by the Sanitary Inspector.

**BRIDGEND and COWBRIDGE—(Cowbridge Division).**

Medical Officer of Health—C. BOOTH MELLER, M.R.C.S., L.R.C.P.

Area in acres, 37,985.

			1891.				1894.
Population	..	..	6,000	..	..	..	6,150 (estimated).
Birth-rate, 28·6.	Death-rate, 12·68.		Zymotic-rate, 1·9.		Infant Mortality-rate, 95·4.		
	Phthisis death-rate, 1·4.		Respiratory death-rate, 1·2.				

The general death-rate is very low—the lowest ever recorded for the district.

**INFECTIOUS DISEASES.**

The district was exceedingly free from infectious sickness, and only 40 notifications were received; out of these 30 were erysipelas, 6 scarlatina, 2 diphtheria, 4 typhoid or enteric fever, and 1 continued fever.

*Scarlatina*.—Four children suffered at St. Donats in January. The disease originated in a house where there had previously been an outbreak of diphtheria. One person at the village post office took the complaint, and the Post-Master General ordered the temporary removal of the post office at Dr. Meller's suggestion. Isolated outbreaks were also reported from Llanharraun and Gilestone. It is said that in every instance the disease may be attributed to previous neglect of proper disinfection.

Thirty cases of *erysipelas* were notified. Quite an epidemic!! No particulars are given.

*Typhoid Fever*.—One case at Llanblethian in February attributed to drinking polluted water, and in June another person was attacked in the house immediately opposite. A woman died from this disease in August at Persondy, having contracted it in nursing her daughter. Another case was conveyed to Boverton Place by a servant whose brother had recently suffered similarly.

Several cases of *English Cholera* occurred at Llanblethian, attributed to the use of the sewage-contaminated Cowbridge river water.

*Diphtheria*.—Gellified farm and Colston were visited by this malady in August and November respectively. In the former case, which proved fatal, there was no slop water drain to the house, the slops being thrown outside the back door, and allowed to accumulate in a shallow trench within a few feet of the house.

A large number of persons suffered from diarrhoea in April, May, August, September, October and November. Generally speaking, the more insanitary areas of the district were those which were most frequently affected.

Dr. Meller writes:—"As I have many times before pointed out, one of the most important duties of your Authority, is to take every means to prevent the visitation and extension of infectious diseases. In regard to the former every insanitary condition which is known to be favourable to such must be removed as far as is possible, and in relation to the latter, many important and necessary steps must be taken, such as an isolation hospital or other accommodation, and a proper portable steam disinfecting apparatus provided. Your Inspector should visit every house where such a disease exists, give the necessary instructions as to isolation, and carry out under the direction of the Medical Officer, the most important duties of disinfection personally, at the expense of the Board."

**GENERAL CONDITIONS.**

The *Slaughter Houses* have been frequently inspected by Dr. Meller. Their condition is infinitely better than was the case a few years back. Many, however, remain unlicensed and not properly kept. The requirements of all are given in detail.

*Water Supply*.—The water supply has been adequate during the year. An improved supply is, however, greatly needed for St. Donats, Graig, Llanharraun, Brynna, Llanharry, Llantwit, Llanblethian, and the Leys. The wells at Penylan Newton, Trehingwyllt, Llanmaes, St. Hilary, Llanblethian, Gilestone, Penllyne, Llantwit Major, St. Athans, Llangan, Marcross, Graig, Treos, and Colston, require protection, and nearly every well in the



district requires the walls to be cemented around the sides to a point below the limit of the superficial porous strata.

The *Building Bye-Laws* are said to be in many respects a dead letter, and Dr. Meller disapproves of the way in which new buildings are allowed to be erected, and recommends that no plans be passed by the Authority except after examination of them by the Surveyor, and further that no new house should be occupied until it is fit for occupation, including a proper water supply, drainage, and closet accommodation.

The *Drainage* is defective, or absent in several localities.

Every village in the district is systematically visited by Dr. Meller many times in the year, but no house-to-house visitation has been made by the Inspector.

### IMPROVEMENTS.

Dr. Meller reports thus :—"Although a very large number of most important matters have not yet received the careful consideration of the Authority, or have not been carried into effect, yet I am pleased to say that far more has been accomplished during the past year than during any previous year I have been connected with the district." Amongst others the following may be mentioned :—

The improvements to the water supply of River Row, Tinman's Row, Gas Works, Potteries, and Steam Joinery. Also the repairs to the supply at Llanharry, Llantwit, Llanharra and Colston.

A system of drainage at Brynna.

The extension of Church Street sewer at Llantwit.

New drains at Glamorgan Terrace, The Eagle and Rose Cottage, at Llanharra, The Leys, Treos, and St. Donat's; a few others altered or repaired at Llantwit, Llanharra and Marcross.

Bye-laws have been adopted for Llantwit Major, conferring Urban powers upon the parish in relation to new buildings, streets and nuisances.

Repairs to houses at the Huts, Llanharra, St. Donat's, &c. A large number of new privies provided in several villages, and others repaired.

Another edition of the Bye-laws has been printed.

### REQUIREMENTS.

- (1) The adoption of the Infectious Disease (Prevention) Act, 1890.
- (2) The addition of measles and whooping cough to the notifiable diseases.
- (3) The licensing, registration, and periodic inspection of all slaughter-houses, and the registration and inspection of all dairies and milk purveyors' premises.
- (4) The carrying into effect of the "Dairies, Cowsheds and Milkshops Order," together with the framing of regulations under same.
- (5) The provision of a water supply, and of a system of slop water disposal in such villages as have been reported to be in need thereof.
- (6) The erection of public slaughter-houses.
- (7) The new Sanitary Inspector and Surveyor should be a thoroughly competent and certificated man, and located in a convenient centre of the district.
- (8) All new buildings during the course of erection and plans connected therewith, and all work executed by order, or upon behalf of the Authority, to be carefully and systematically inspected by the Surveyor.
- (9) All orders of the Authority to be carried into effect, and all nuisances abated without delay.
- (10) Disinfection to be carried out under the personal supervision of the Inspector, under the direction of the Medical Officer of Health, at the expense of the Authority.

- (11) Provision made for isolation of cases of infectious sickness, and for the proper disinfection of clothing, &c., by means of a portable steam apparatus.
- (12) Prosecution of persons exposing themselves when suffering from dangerous infectious diseases.
- (13) Distribution of pamphlets relating to the prevention of, and precautions to be adopted during the visitation of infectious disease.
- (14) The duty of public scavenging to be undertaken by the Authority in certain localities requiring it.
- (15) The speedy abatement of all nuisances.
- (16) The abolition of hand-flushed closets, and also of large unventilated cesspools in connection with privies. Cesspools made in accordance with the Bye-laws, or the pail system, or earth closets replacing them.
- (17) All drains and sewers to be properly disconnected, trapped and ventilated, and wheresoever necessary and practicable to be flushed.
- (18) Model plans of privies, closets, drains, and cottages to be supplied for the use of builders, and plans of all new drains and sewers, and of the more important old ones, to be kept for reference, at the Clerk's office.
- (19) Authority obtained to make Bye-laws applicable to such localities needing them, but where urban powers do not apply, regarding the alteration of old buildings, and the erection of new ones, and the construction of drains, privies, closets and cesspools.
- (20) Pollution of streams should be no longer permitted.
- (21) House-to-house visitation of the entire district should be made by the Inspector, in accordance with the Public Health Act, 1875, Sections 75—92, and the Housing of the Working Classes Act, 1890, Section 32.

There is *no* account of the work done by the Inspector.

**CARDIFF (Part of the District in Glamorganshire).**

Medical Officer of Health—R. PRICHARD, M.D.

Area in acres, 68,435.

	1891.	1894.
Population .. .. .	18,271. .. .. .	18,709 (estimated).
Birth-rate, 31.1.	Death-rate, 15.8.	Zymotic-rate, 1.3.
	Phthis death-rate, 1.07.	Respiratory death-rate, 2.5.
		Infant Mortality-rate, 125.

These rates are satisfactory and about the same as those for rural districts in England and Wales.

**INFECTIOUS DISEASES.**

326 cases were notified and 26 deaths, thus :—

	Cases.	Deaths.
Scarlatina .. .. .	44 .. .. .	0
Diphtheria .. .. .	28 .. .. .	3
Memb. Croup .. .. .	3 .. .. .	2
Enteric Fever .. .. .	28 .. .. .	6
Erysipelas .. .. .	6 .. .. .	0
Whooping Cough .. .. .	203 .. .. .	14
Dianthœa .. .. .	14 .. .. .	1
Total .. .. .	<u>326</u>	<u>26</u>

*Scarlatina*.—The disease was not prevalent at any time. 21 cases occurred in Llandaff parish and city at different periods, 3 at Maindy, and 10 in and near Ely. 3 at East Aberthaw, 7 Dinas Powis, 3 Eastbrook, 1 Cwrtyralla, 2 St. Fagans. All the possible precautionary measures were adopted, and in no instance did the disease spread. Two cases were removed to the Cardiff Isolation Hospital.

*Diphtheria*.—Eight cases occurred in the parish of Llandaff, 8 at Llanishen, 1 Llantrithyd, 1 Pendoylan, 1 Penmark, 1 Rhose, 1 East Aberthaw, 1 Radyr, 1 St. George, 6 parish of Whitchurch. Defective drains and insanitary conditions in general were noticed to be closely associated with its prevalence and incidence. The usual precautionary measures were observed, disinfectants supplied, and any existing nuisances abated without delay. Dr. Pritchard writes—"During the past year great advance has been made in the treatment of this very fatal disease. In anti-toxin—the attenuated virus of diphtheria—we have a specific, if it is used at a sufficiently early stage. The Glamorgan County Council will, doubtless, in the near future establish a laboratory to which specimens of the membrane that affects the throats of stricken patients could be sent and examined for the bacillus of this disease. If these were present in however mild a case the proper treatment could be resorted to at once and every precaution taken."

*Typhoid Fever*.—The greater number of cases, viz., 16, were in the parish of Llandaff. Most of the cases are attributed to polluted water, but one case at Penttyrch to a foul ditch and offensive piggeries.

*Whooping Cough*.—The epidemic which was prevalent in the Western parishes in 1893, and had reached Llandaff by the end of that year, continued its progress North and East during last year; Penttyrch village was invaded earliest, and then Whitchurch parish, where in April and May nearly every susceptible person was attacked. The parishes of Llanishen, Rudry and Van were visited in the early summer.

*Measles* broke out in the autumn amongst children attending St. Fagans and Radyr day schools. Both were closed, and eventually the disease, which had spread to Gwaelodygarth, Tongwynlais and Rubina, ceased.

An *Isolation Hospital* and *disinfecting apparatus* are much needed.

## GENERAL CONDITIONS.

The house-to-house visitation has not been systematically carried out, but frequent inspections were made of the different localities by Dr. Prichard and the Inspector, and a great many nuisances abated.

All complaints, even if anonymous, are attended to, and an appeal is made to members of the Council, which is now representative of every locality, to report nuisances of which they may have knowledge.

The Byelaws with respect to new buildings, drainage, &c., were enforced as thoroughly as possible, but the necessary supervision was found difficult owing to the large area of the district.

Certificates for water supply, under Section 6 Public Health (Water Act), 1878, were granted for 114 houses.

The licensed and registered slaughter houses were duly inspected and the Byelaws enforced. All the slaughter houses were visited and supervised.

The *dairies, cowsheds and milk shops* were duly inspected, and the provisions of the Byelaws carried out.

## IMPROVEMENTS.

The sewerage of Tongwynlais, Whitchurch, Llandaff Yard, Maindy, and Ely have been completed, and that at Glamorgan Street, Pontcanna, undertaken.

The extension of the water supplies of St. Andrew's, Whitchurch, Llandaff, Llanishen, Radyr and Penttyrch.

Private streets improvements at Llandaff Yard and Maindy.

A portable steam disinfecting apparatus.

Twenty-one houses were closed.



**GOWER.**

Medical Officer of Health—H. E. RAWLINGS, M.R.C.S., L.R.C.P.I.

Area in acres, 57,006.

		1891.		1894.
Population	.. ..	7,428	.. .. .	7,428 (estimated).
Birth-rate, 23·1.	Death-rate, 13·7.	Zymotic-rate, 0·2.	Infant Mortality-rate, 110.	
	Phthisis death-rate, 2·1.	Respiratory death-rate, 2·0.		

The Phthisis and Respiratory rates are high, but the others are satisfactory. Out of 102 deaths registered 19 were those of children under 1 year of age, and 32 of persons over 65 years of age.

**INFECTIOUS DISEASES.**

The Infectious Disease Notification Act, 1889, has *not* been adopted. The infectious cases that came under the notice of the Medical Officer of Health were 7 of scarlatina, 2 of diphtheria, 1 of croup, and 2 of typhoid fever. There was 1 fatal case of diphtheria and 1 of croup. One scarlatina case was imported, but in respect of the remainder no cause could be ascertained. The origin of the diphtheria and croup cases is obscure; the two cases of the former occurred in the same house simultaneously and apparently spontaneous'y. The two typhoid cases occurred simultaneously in the same house, and it was thought that they had been caused by an offensive odour from a neighbouring pig-stye, which has since been remedied.

**GENERAL CONDITIONS.**

The *water supply* is stated to be very good and derived almost entirely from springs which produce a clean well-aerated water. The supply for one or two villages (not mentioned) is not considered quite satisfactory. The matter is now under consideration, and will probably soon be taken in hand.

One dwelling was closed, 2 others repaired, and 5 disinfected after infectious diseases.

**IMPROVEMENTS.**

The draining and filling up of stagnant pools at Murton Village at a cost of £70.

34 nuisances abated, consisting of—Overcrowding, 1; houses unfit for habitation, 2; ashpits and privies, 22; deposits of refuse and manure, 7; and pig-styes, 2.

**REQUIREMENTS:**

Not mentioned.

**REMARKS.**

The Report is printed, and appended is a summary of the work done by the Surveyor and Sanitary Inspector.

**MERTHYR (Part of the District in Glamorganshire).**

Medical Officer of Health—THOMAS J. DYKE, F.R.C.S.

Area in Acres, 22,354.

	1891.	1894.
Population .. ..	13,715 .. ..	15,360 (estimated).
Birth rate, 32·25.	Death rate, 22·1.	Zymotic-rate, 0·5.
		Infant Mortality-rate, 175.
	Phthisis death-rate, 0·8.	Respiratory death-rate, 3·9.

The general death rate is exceedingly high ; the highest of any in the County.

**INFECTIOUS DISEASES.**

*Notifications.*—The number of notifications received from medical practitioners in Gelligaer parish was 120, including 78 scarlet fever ; 8 diphtheria ; 15 typhoid or enteric fever ; 2 puerperal fever and 17 erysipelas. 7 deaths were recorded. In Rhigos parish *no* case occurred.

**GENERAL CONDITIONS.**

Dr. Dyke gives a full account of the sanitary condition of each village within the district.

*Hospital Accommodation.*—Dr. Dyke remarks :—“The Isolation for the reception of persons sick of fever, at Penybank, continues to be kept ready for the reception of patients. Happily no case occurred requiring admission thereto. The persons ill of typhoid were removed to the Merthyr Fever Hospital as being more convenient.”

*Removal of Refuse.*—Throughout the parish of Gelligaer the removal of surface refuse and the general care of the streets, is done by workmen employed by the Highway Board, in each of the many villages and town. The Lighting of streets at night with gas or oil-lights is done by the Sanitary Authority.

All the towns and villages are 23 in number :—

- (1) Sewered and sewage disposed of by irrigation, 6 villages.
- (2) Bucket system—pail closet cleansed by contractor, 13 villages.
- (3) Cesspit closets to old houses cleansed by owners, 4 villages.

*Water Supply.*—The villages of Hengoed and Gilfach are inadequately supplied.

**IMPROVEMENTS.**

Water Supply :—

Extension of water mains at Bedlinog.

Repairs to Llancaiach reservoir.

Sewerage :—

The sewerage of Bedlinog (part of).

Extension at Pontlloctyn.

Covering open sewer at Pontlloctyn.

Extension at Brithdir and Tirphil.

New sewer and straining tank at Gilfach.

New drains at Trelewis.

New houses, 120.

**REQUIREMENTS.**

The protection of the water supply of Newtown Bute and Pontlloctyn.

The sewerage of a part of Pontlloctyn which is not at present connected with the sewer.

The completion of the sewerage of Bedlinog.

The discontinuance of allowing the contents of channels vested in the Authority to discharge their contents into the river without purification *i.e.* at Bargoed, Bedlinog, Trelewis, also Deri and Ystradmynach.

The dangerous D traps in use at Gilfach-Fargoed, should be replaced by suitable ones.

The Council should cause all dwellings which from dampness, want of ventilation, dilapidation, and other structural defects, are unfit for human habitation, to be placed in proper repair, or permanently closed.

Regulations for the management of *dairies*, *cowsheds*, and *milkshops*, should be framed.

The adoption of the Infectious Disease Prevention Act, and such parts of the Public Health Acts (Amendment Act), as are applicable to the district.

Appended is statement of the work done by the Surveyor and Sanitary Inspector.

## NEATH.

Medical Officer of Health—T. P. WHITTINGTON, L.R.C.P., L.R.C.S.

Area in acres, 52,844.

		1891.		1894.
Population	.. .. .	23,953	.. .. .	23,593 (estimated).
Birth-rate, 35·7.	Death-rate, 15·80.	Zymotic-rate, 1·4.	Infant Mortality-rate, 133.	
Phthisis death-rate, 1·1.		Respiratory death-rate, 3·0.		

## INFECTIOUS DISEASES.

The number of notifications has been exceedingly high, measles and scarlet fever taking the lead. The total number notified is stated to have been 1,096, including—

	CASES.	DEATHS.
Small Pox .. .. .	4 .. .. .	0
Scarlet Fever .. .. .	43 .. .. .	3
Diphtheria .. .. .	1 .. .. .	0
Membranous Croup .. .. .	2 (notified) .. .. .	7 (registered).
Enteric Fever .. .. .	38 .. .. .	3
Continued Fever .. .. .	1 .. .. .	0
Puerperal Fever .. .. .	2 (notified) .. .. .	3 (registered).
Erysipelas .. .. .	20 .. .. .	1
Measles .. .. .	985 .. .. .	11
Diarrhœa .. .. .	3 (notified) .. .. .	4 (registered).
Whooping Cough .. .. .	.. .. .	3

*Small Pox.*—On January 18th, three cases were notified from 19 Copper's Row, Cwmavon. All happened to be mild cases, and were removed to the Cymla Isolation Hospital. As many children and adults as possible were vaccinated in the neighbourhood of Copper's Row. In February, another case was notified at 17 Copper's Row, in the person of a woman who caught the infection by visiting the other three cases in spite of all remonstrance. She was removed to the Hospital by a Magistrate's order. All made a good recovery, and there was no further spread of the disease.

Thirty-nine cases of *typhoid fever* came under observation. The localities in which these cases chiefly occurred were Burrow's Road and New Road (Skewen), and Cwmavon. Upon analysis the water from the different wells was found to be free from all contamination, and fit for drinking. Most of the cases are said to have first suffered from influenza, and afterwards to have developed enteritis, caused by some indiscretion in the diet. Dr. Whittington is of opinion that the disposal of excrement in the cottagers' gardens is not a proper system, as it is often buried quite near the surface, and without using any disinfectant whatever. The excreta are often exposed and washed by the rain from place to place.

The notified cases of *scarlet fever* were 43, widely distributed throughout the district. The disease did not assume an epidemic form at any time.

985 cases of sickness were attributed to *Measles*, which commenced at Llantwit Lower and gradually spread from hamlet to hamlet until it became general throughout the whole district. The outbreak was so severe at Cadoxton, Aberdulais, and Tonna that it was deemed necessary to advise the closure of the schools. Out of the large number of cases only three proved fatal.

*Puerperal Fever.*—Two cases occurred at Michaelstone Lower, and one proved fatal. Both were attended by the same midwife, who was ordered to discontinue her attendance upon any lying-in cases for six weeks. This she did, and with a good result, as no more cases occurred.



## GENERAL CONDITIONS.

Attention was called to the scarcity of water at Crynant, Cilfrew, Cadoxton, Skewen, Aberdulais and Seven Sisters in the Medical Officer's Report for 1893, and so far, he says, "nothing has been done to increase the supply for Crynant, although there is an ample supply in the immediate neighbourhood which could, without much expense, be carried to the place." A supply has been provided for Cilfrew. Nothing has been done with regard to Seven Sisters, and the supplies of Cadoxton and Aberdulais are *in statu quo*.

## IMPROVEMENTS.

A large number of privies have been erected, repaired, and cleansed in the various localities. In many new drains have also been provided, repaired and cleansed.

No other particulars are supplied.

## REQUIREMENTS.

These are not specified, but it may be gathered from the report that they are as follows :—

- (1) A better supply of water for Seven Sisters, Aberdulais, Cadoxton and Skewen.
- (2) Provision for the sewerage and drainage of Cwmavon, Skewen, and Cadoxton.

This Report refers to the whole Neath Rural District including the parish of Ystradyfelta, in Breconshire, which, according to the census of 1891, had an area of 19,355 acres and a population of 594. Separate figures for the Glamorganshire portion, whose area is (52,884—19,355) 33,509 acres, were not given.

**PONTARDAWE (Eastern Division).**

Medical Officer of Health—DAVID THOMAS, M.D.

Area in acres, 10,352.

			1891.			1894.
Population	..	..	7,291	..	..	8,270 (estimated).
Birth-rate, 35·7.	Death-rate, 19·4.		Zymotic-rate, 1·9.			Infantile Mortality-rate, 192.
	Phthisis death-rate, 1·9.				Respiratory death-rate, 2·9.	

The general death-rate is high, and infantile mortality very high, and said to be “dependent chiefly upon improper artificial feeding and careless nursing, combined, too often, with the deleterious effects of insanitary surroundings.”

**INFECTIOUS DISEASES.**

The Infectious Disease (Notification) Act has *not* been adopted, and consequently no correct record of infectious sickness is available. Twenty-four cases of infectious diseases came to the knowledge of the Medical Officer of Health, comprising, 22 typhoid fever, and 2 membranous croup, and resulting in 5 and 2 deaths respectively.

*Measles and Whooping Cough* were also prevalent, the number of registered deaths from the latter being 9.

*Croup*.—The two deaths from this disease occurred to children of the same family, resident in a detached cottage, and within ten days of each other. They are attributed to local influences, there being no throat affection prevalent at that time in the locality.

*Enteric or Typhoid*.—22 cases and 5 deaths, or 0·6 per 1,000. Though these deaths occurred in places widely apart, there was not an element of doubt but that they had their sources in the Twrch Valley. Dr. Thomas writes:—“The district generally had been totally free from fever for some time, until towards the end of 1893, when a case was imported from the Rhondda Valley, through a person residing at Tumble Row, near the Board Schools, Cwmtwrch. The case was a severe one from the first, and to aggravate matters the house was in a bad state of repairs, with altogether very insanitary surroundings. Notwithstanding that all available precautions were taken, the disease spread, and soon assumed an epidemic form of a severe type. The localities attacked were the whole of Twrch Valley, Cwmllynfell, Penrhiwfawr, and detached cottages on the Gurhyd and Ystalyfera. Excepting Ystalyfera, all these localities are either faulty or deficient in water supply, and the line of invasion of this outbreak clearly indicated the places that would probably be attacked in the event of a water-borne disease (particularly cholera) being imported into the district. The Infectious Disease Notification Act not being in operation in the district, it would be impossible to speak accurately as to the number of cases; but over 20 cases of undoubted fever came under my own observation. As custodians of the public health, it is our duty not only to prevent the spread, but also the occurrence of preventable sickness and death, and particularly with the view of preventing such another outbreak as the one we have just had in this district, it is to be hoped that immediate steps be taken to hasten on the much-talked-of scheme for supplying these localities with pure and wholesome water.”

Nine deaths, all in children under five years of age, were attributed to *whooping cough*, which was very prevalent in the spring, and continued in a somewhat modified form throughout the year.

**GENERAL CONDITIONS.**

The *dairies* and *cowsheds* are periodically visited, and the *slaughter houses* and *common lodging houses* receive careful attention.

The present mode of scavenging at Ystalyfera is said to answer well and gives general satisfaction. Dr. Thomas again impresses upon the Council the great need of adopting the Infectious Disease (Notification) Act.

## IMPROVEMENTS.

- (1) The Clee Road spring, which was polluted by sewage or liquid manure from an adjoining stable yard has been remedied.
- (2) The construction of 80 yards of 18-inch stoneware drains at Ystalyfera, together with manholes, &c.
- (3) Operations in connection with supplying Penrhiwfawr with water, but owing to certain complaints respecting diversions of the springs from which it was proposed to secure the supply, the work has been suspended.

## REQUIREMENTS.

- (1) The adoption of the Infectious Disease (Notification) Act.
- (2) Improved water supplies to Cwmtwrch, Godre'rgraig, Craigymarched and Alltygrug Road.
- (3) Bye-laws enabling greater supervision over the construction of new buildings, and the more speedy abatement of nuisances, particularly in cases of disputed ownership.

**PONTARDAWE (Western Division).**

Medical Officer of Health—G. GRIFFITHS, M.R.C.S., L.R.C.P.

Area in acres, 17,971.

	1891.	1894.
Population .. .. .	10,174 .. .. .	10,483 (estimated).
Birth-rate, 37·6.	Death-rate 15·07.	Zymotic-rate, 0·29.
	Phthisis death-rate, 2·5.	Respiratory death-rate, 4·7.
		Infant Mortality-rate, 133.

The Phthisis and Respiratory rates are somewhat high.

**INFECTIOUS DISEASES.**

The Infectious Disease (Notification) Act has *not* been adopted, and consequently no correct record of infectious sickness is available.

11 cases of Scarlet Fever, and 2 of Enteric Fever, came to the knowledge of the M.O.H. Of Scarlet Fever 1 case was fatal, and also 1 from Measles.

*Whooping Cough*, in a mild form, was prevalent among young children during the whole year, and *Scarlet Fever* in February and August. *Measles* appeared during March and September. In November it became an epidemic of a mild kind, and the severe cases only were seen by the Medical Practitioners.

Dr. Griffiths writes as follows :—"An outbreak of *Anthrax* occurred at Penybanc Farm, near Clydach, and 4 of the cattle died. Every precaution was taken to prevent the disease spreading, the milk from all the cows was destroyed daily for a considerable time, all the outhouses were thoroughly disinfected, and by the end of September the disease was completely stamped out, and ever since all has gone satisfactorily."

In connection with Phthisis, which disease the M.O.H. tells his Council must henceforth be looked upon as a contagious malady, an endeavour was made to isolate the sick from the healthy as far as this was practicable, and all sputa were disinfected and rendered inert. Of this disease, the M.O.H. writes :—"It follows as a natural sequence, when one in a family, who is predisposed to Phthisis, contracts the disease, that the remainder of the family, with an invalid in their midst, are placed in the most favourable conditions for contracting this fatal scourge."

**GENERAL CONDITIONS.**

"The general health of the district throughout the year, has been fairly good." No other particulars are supplied, with the exception of a statement (in Table C.) to the effect that *Trebanos*, and *Brecon Road, Pontardawe*, and portions of *Alltwen* and *Pheasant Bush*, are inadequately supplied with water.

**IMPROVEMENTS.**

- (1) The improvement of two dip wells at Craigtrebanos, securing their water against further pollution.
- (2) The extension of the water mains for 360 yards in Brecon Road, so as to take in the overflow from the Workhouse springs.
- (3) At Clydach, about 440 yards of 18 inches stoneware pipes have been laid in Brook Street, Penywern Road, and a portion of Vardre Road, in order to divert the watercourse and carry off surface drainage.

**REQUIREMENTS.**

These are not specified.



**LLANTRISANT and LLANTWIT FARDRE.**

Medical Officer of Health—D. W. DAVIS, M.D.

Area in acres, 17,358.

	1893.	1894.
Population . . . . .	8,509 . . . . .	9,509 (estimated).
Birth-rate, 34·4.	Death-rate, 16·6.	Zymotic-rate, 1·4.
	Phthisis death-rate, 0·6.	Infant Mortality-rate, 124.
		Respiratory death-rate, 2·6.

There were no uncertified deaths.

The number of children successfully vaccinated was 191.

**INFECTIOUS DISEASES.**

Under the Infectious Disease (Notification) Act, there were notified 136 cases—132 at Llantrisant and 2 in Llantwit Fardre—comprising 117 cases scarlet fever, 9 enteric fever, 5 erysipelas, 4 diphtheria, and 1 puerperal, and resulting in 9 deaths, 2 from scarlatina, 3 enteric fever, 3 diphtheria, and 1 from membranous croup.

*Scarlet Fever* first appeared at Tonrefail, and in April it became so prevalent that it was thought desirable to close the school. This having been done, the number of notifications at once fell, and gradually approached the vanishing point; but again rose when the schools were re-opened. This disease was of a mild type, only 2 out of 117 cases notified having terminated fatally.

*Diphtheria*.—All the patients attacked with diphtheria fell victims to the disease. The two cases at Church Village were unquestionably imported from Presteign. All precautionary measures were observed, and the disease did not spread.

No other cases of zymotic disease were traceable to importation, but most, if not all, were found in suspicious association with bad and foul drains, impure water, or some other serious sanitary defects.

*Isolation Hospital*.—Dr. Davies writes:—"It is to be regretted that no place has yet been provided in the district for the reception of patients suffering from dangerous infectious diseases. . . . . The subject has been already, I believe, under the consideration of the Board, and a site fixed for the building. If the work be proceeded with, I think there should be provided in connection with the building a disinfecting chamber."

**GENERAL CONDITIONS.**

The attention of the Council is again directed to the dangerous position of some of the surface water *gratings* in the village of Llantrisant. It is said that these gratings in some places open within a few feet of doors and windows, and had they been designed for the discharge of sewer gas directly into the houses, some of them could not have been more ingeniously arranged.

Attention is also called to the importance of the disconnection of house drains from the main sewer.

Five houses at Llantwit-Fardre were condemned as unfit for human habitation—they were damp and mouldy. Some of them badly lighted, with the floors broken and the roofs admitting rain. One or two of them are still occupied. The condition of many others is said to be quite as bad, and it is pointed out that one of the chief wants of the district, is a better class of workmen's cottages. Most houses are provided with closet accommodation of some kind; but privies of the ancient type with unbricked and uncemented cesspits are still the rule.

The *Scavenging* is not so thoroughly done as it ought to be.

*Water Supply*.—Several samples were analysed, and with two exceptions, were found to be absolutely unfit for use. The attention of the Council had been frequently directed to the suspicious sources of supply. Most, if not all, the wells of the town of Llantrisant are shallow ones, and unquestionably within the area of subsoil pollution.

## IMPROVEMENTS.

Water-mains from Pontyclun to Loftus Terrace, supplying 48 houses.

At Cross Inn, an extension of the water-main levels has also been made, supplying 14 houses.

At Miskin Village, all the old drains have been replaced by new ones; a sewage carrier with distributing outlets has been provided.

At Pontyclun a new storage tank with a capacity of 54,000 gallons, has been constructed.

The sewer in Newbridge Road has been relaid and extended; the old pipes having been replaced by new.

In Commercial Street a new joint-cemented sewer has been laid.

At Gilfach Goch a system of sewerage is in course of construction, and about  $6\frac{1}{2}$  acres of land has been acquired, upon which the sewage will be discharged and distributed.

The total estimated cost of this sewerage scheme is £2,000, and the Local Government Board has sanctioned the loan of that amount. The total expenditure incurred for carrying out the works in other parts of the district, referred to above, was about £1,500.

The scheme for the supply of water to Gilfach Goch, Tonyrefail and Llantrisant is now in hand.

## REQUIREMENTS.

- (1) Isolation hospital and a disinfecting apparatus.
- (2) A better and more plentiful supply of water for several localities.
- (3) The closure or repair of dilapidated dwellings that are unfit for human habitation.
- (4) The efficient disconnection of house drains from the main sewers.
- (5) The desirability of making a house-to-house inspection of the whole district at stated intervals.
- (6) The defective street gratings at Llantrisant should be remedied.

**SWANSEA (Llangyfelach Division).**

Medical Officer of Health—E. RICE MORGAN, M.R.C.S., L.S.A.

Area in acres, 10,001.

	1891.	1894.
Population .. ..	10,528 .. ..	11,266 (estimated).
Birth-rate, 31·4.	Death-rate, 16·8.	Zymotic-rate, 2·8.
	Phthisis death-rate, 1·6.	Infant Mortality-rate, 164.
		Respiratory death-rate, 3·0.

The general death and zymotic-rates are in excess of those for 1893. A small gradual diminution is reported in the phthisis death-rate. The average life attained was 24 years and 11 months.

**INFECTIOUS DISEASES.**

Particulars as to number of cases and deaths resulting from the zymotic diseases are contained in the following Table :—

	Cases.	Deaths.	Rate per 1,000.
Small Pox .. ..	1 .. ..	0 .. ..	0·000
Measles .. ..	? .. ..	14 .. ..	1·331
Scarlet Fever ..	109 .. ..	7 .. ..	0·622
Diphtheria .. ..	0 .. ..	0 .. ..	0·000
Whooping Cough ..	? .. ..	7 .. ..	0·622
Typhoid or Enteric Fever	30 .. ..	2 .. ..	0·177
Diarrhoea ... ..	? .. ..	1 .. ..	0·088

The Amount of sickness from zymotic diseases is high, and *measles* stands at the head of the list with 14 deaths, *scarlet fever* and *whooping cough* come next with 7 deaths from each.

As *measles* is not included amongst the notifiable diseases, it is impossible to give the exact number of cases. At the end of the year the epidemic was practically at an end.

*Scarlet fever*.—The number of cases 109—in Clase, 53, and in Llansamlet, 56—and deaths 7. No other particulars are supplied.

*Erysipelæ*s.—Six cases were notified, all in isolated houses, and always confined to a single case.

*Typhoid fever*.—Thirty cases in all—25 in Clase, and 5 in Llansamlet. Details of the most important of the outbreaks are given, and it appears that five cases in Field and Midland Terraces are attributed to *accumulated refuse from a piggery and a fowl house*; four cases at Ynyslanglws to *overcrowding and defective drainage* (here notification of the illness arrived when the fever was too far advanced to have patients removed to the Infectious Hospital), and six at Penwaunfach to *contaminated water*, which was obtained from an open well, and made use of by cattle for drinking.

**GENERAL CONDITIONS.**

Caersalem, in Clase, Bonymaen and Cefn, in Llansamlet are inadequately supplied with *water*. Since the stoppage of the Pentrevelen Colliery, it is reported that the foul water, *i.e.* the water containing much iron in it, finds its way out along the old workings at Glyndu, and contaminates the supply to Tycanol and Midland Terrace, &c., hence this district is now without any provision for drinking water.

The *drainage* of Midland Terrace is reported to be unsatisfactory.

*Burial grounds*.—It appears that since the closure of the Churchyard at Llangyfelach, there is really no proper provision for the burial of the dead. The various burying grounds adjoining the Dissenting places of worship are inadequate and inconvenient. The neighbourhood of Ynysforan is suggested as a suitable spot.

## IMPROVEMENTS.

- (1) Construction of storage tank, and laying 640 yards 4-inch mains at Bwllfa, Clase, and erection of public fountains at ditto.
- (2) Extension of 3-inch water mains to Forest Tinsplate Works, Llansamlet.
- (3) Passing of plans, and erection of 71 new buildings.

## REQUIREMENTS.

- (1) The adoption of the Infectious Disease (Prevention) Act, 1890.
- (2) Adequate supply of water for Caersalem, Bonymaen, Cefn and Midland Terrace.



**SWANSEA (Llandilo-Talybont Division).**

Medical Officer of Health—TRAFFORD MITCHELL, M.D.

Area in acres, 17,246.

	1891.	1894.
Population .. ..	13,449 .. ..	14,970 (estimated).
Birth-rate, 33·7.	Death-rate, 16·8.	Zymotic-rate, 1·2.
	Phthisis death-rate, 1·6.	Infantile Mortality-rate, 160.
		Respiratory death-rate, 3·9.

These mortality rates compare favourably with those for 1893. The Zymotic death-rate is the lowest since 1885. Of the 252 deaths during 1894, 81, or 32·1 per cent., took place under the age of one year; and 123, or 48·8 per cent., took place under the age of five years.

**INFECTIOUS DISEASES.**

103 notifications were received, comprising 2 small pox, 79 scarlatina, 2 diphtheria, 1 croup, 14 typhoid or enteric fever, 2 puerperal, and 3 erysipelas. Of these the 2 small pox and 3 enteric or typhoid fever cases were removed and treated in the Borough of Swansea Fever Hospital.

The following table shows the number of cases, total deaths and death-rate from the principal zymotic diseases.

	Cases.	Deaths.	Death-rate.
Small Pox .. .. .	2 ..	0 ..	0·00
Measles .. .. .	? ..	1 ..	0·39
Scarlet Fever .. ..	79 ..	2 ..	0·79
Diphtheria .. .. .	2 ..	2 ..	0·79
Whooping Cough ..	? ..	10 ..	3·96
Typhus Fever .. ..	0 ..	0 ..	0·00
Enteric or Typhoid Fever .. ..	14 ..	2 ..	0·79
Simple or Continued Fever .. ..	0 ..	0 ..	0·00
Diarrhœa and Dysentry .. ..	? ..	1 ..	0·39

In addition to the notifiable diseases, a few cases of measles and influenza occurred during the year, and whooping cough appeared in every part of the division.

*Small Pox.*—Dr. Mitchell gives the following account of the cases :—"The patients, a grocer and his wife, living in High Street, Gorseinon, were removed as soon as possible to the Swansea Fever Hospital, the bedding was at the same time conveyed to Swansea for disinfection, the house and shop were thoroughly disinfected by the Inspector of Nuisances, and the disease was effectually stamped out. Most of the inmates of adjacent houses were re-vaccinated, and all unvaccinated children in Gorseinon were promptly vaccinated. It is gratifying to be able to state that both patients had been vaccinated in infancy, and that both made excellent recoveries. The infection was, beyond a doubt, imported to Gorseinon by a visitor, who had not herself been affected, but who had been in contact with a fatal case at Aberavon."

*Scarlet Fever* has not been absent from the Division for the last 20 years, but it is gratifying to be able to state that only 79 cases were notified in 1894, as compared with 130 in 1892, and 180 in 1893. There are many reasons (says Dr. Mitchell) accounting for the prolonged stay of the disease—amongst them are:—

- (a) The intercourse at market, chapels, and schools.
- (b) The very mild character of most of the cases.
- (c) Imperfect isolation.

(d) A firm belief exists amongst the common people that most children are destined to contract scarlet fever sooner or later, and that, if an epidemic of a mild type occurs, it is the bounden duty of parents to give the children a chance of getting it, so that they may acquire immunity before an epidemic of a malignant nature visits the locality. Dr. Mitchell has met with many cases where parents have taken their children to infected houses under this mistaken sense of duty.

(e) The reckless manner in which relatives and friends visit infected houses.

(f) Wilful exposure of children in the peeling stage.

The only epidemic during the year was at Pontardulais, where 32 cases occurred.

*Membranous Croup.*—Only 1 case, and this occurred in a cold, damp, and exposed house, and its situation and filthy surroundings were precisely such as would tend to the fostering and fatality of this disease.

*Enteric or Typhoid Fever.*—The cases were widely distributed. Some of the cases were imported, and others are attributed to polluted water and accidental contamination of food. Dr. Mitchell observes that during the last 4 years the number of Enteric Fever cases notified annually has remained nearly constant. 17 cases were notified in 1891, 17 in 1892, 15 in 1893, and 14 in 1894, and the distribution of these 63 cases is very suggestive. The Gorseinon area, with a population of less than 2,000, furnished 28 cases, while the remaining portion of the Division, with a population of over 12,000, furnished only 35. The evil pre-eminence thus earned by Gorseinon is, beyond doubt, due mainly to its lack of pure water and good drainage. The water is of a very questionable character, and drainage is absolutely unknown, except in the case of few houses. Dr. Griffiths in his Annual Report for 1893, stated that "Gorseinon is thus branded as the worst locality in the district in a sanitary sense," and Dr. Mitchell regrets that the above statement is equally applicable at the present day, 1895.

#### GENERAL CONDITIONS.

*Rainfall.*—The following particulars were supplied through the kindness of Sir John Llewellyn, Bart., Penllergaer :—

Height above sea level, 240 feet.

Total rainfall, 56·62 inches.

Average annual rainfall at Penllergaer, 1884-93, 45·25 inches.

Greatest annual rainfall at Penllergaer, 1884-93, 61·61 inches (1891).

Average annual rainfall in England and Wales, 1884-93, 31·23 inches.

*Water Supply.*—Previous to 1894, the only populous centres with a satisfactory water supply were Waunarlwydd, Sketty, and Treboeth. There is no supply in the Caersalem portion of Penderry, from Bryngelli to Mynyddbach. Pontardulais and Gorseinon are very inadequately supplied. There are a great number of wells liable to pollution. Several clusters of houses, *e.g.*, Pontlliw, Penyrheol, Pencaerwn, and Grovesend row are *not* provided with a convenient supply of pure water.

*Drainage.*—No main sewers have been provided in the Division. The need of such a system is decidedly most urgent in the case of Gorseinon and Pontardulais.

*Disposal of Refuse.*—The "pail system" has been in vogue for many years, and the more populous centres are attended to by scavenging contractors, all of whom, except one, performed their duties better in 1894 than in previous years.

*Slaughter Houses.*—With the exception of the one recently completed in Pontardulais, there is no satisfactory slaughter house in the Division.

#### IMPROVEMENTS.

(1) Works of water supply for Penyrheol, Dunvant, Killay, Garnlas, Tycoch, Bronnewydd, Mynydd-bach-y-glo, Ystrad Road, Pont Lliwytha, Forestfach, and St. Peter's Road, Cocket.

- (2) Extension of 3-inch mains at Heolfelin, Waunarlwydd, and provision of 2 public fountains.
- (3) One additional public fountain erected at Caerbadell, Cwmbwrla.
- (4) Laying of service pipe from 4-inch water main to Cwmbwrla Foundry.
- (5) Providing new public well at Waungron, Llandilo-Talybont.
- (6) Works of drainage for Bryn Terrace, and portion of Lime Street, Gorseinon.

Plans and estimates have been prepared for

- (a) Water supply for Gorseinon district.
- (b) Drainage of Gorseinon.
- (c) „ „ Pontardulais.

The Infectious Disease (Prevention) Act has been adopted.

### REQUIREMENTS.

The requirements of the Division may be summarised thus:—

- (1) The provision of an adequate supply of wholesome water for Gorseinon, Pontardulais, and other localities.
- (2) A system of drainage and sewerage for Gorseinon, Pontardulais and other places.
- (3) A public slaughter-house at Gorseinon.
- (4) Bye-laws and Regulations with respect to *nuisances, slaughter-houses, dairies, cowsheds and milkshops*.
- (5) Pavement of back yards and areas about building.

Details of the work done by the Inspector are appended.

## LLANELLY—Part of the District in Glamorganshire, viz., the Borough and Parish of Loughor.

Medical Officer of Health—EVAN EVANS, B.A., M.B., D.P.H.

Area in acres, 3,648.

	1891.	1894.
Population .. .. .	4,196 .. ..	4,342 (estimated).
Birth-rate, 39·6.	Death-rate, 17·4.	Zymotic-rate, 1·1.
	Phthisis death-rate, 2·9.	Infant Mortality-rate, 123.
		Respiratory death-rate, 3·9.

Of the total 55 deaths registered, 21, or 38 per cent., were those of infants under one year of age. 171 births were registered.

### INFECTIOUS DISEASES.

Eighty-nine cases were notified, comprising 80 scarlet fever, 1 croup, 5 typhoid fever, 2 puerperal fever, and 1 erysipelas. Of these and other zymotic diseases, there proved fatal, 1 croup, 1 puerperal fever, 2 whooping cough, and 1 diarrhœa.

*Scarlatina*.—During the month of November a severe epidemic of fever prevailed in the parish of Loughor, and the elementary schools in consequence were closed for three weeks. The rapid spread of the disease was caused by the children attending the elementary schools and mixing with others who came from infected houses. As soon as the schools were closed, the disease ceased to assume an epidemic character. All the infected houses were, as far as possible, disinfected.

*Typhoid Fever*.—The three cases at Upper Loughor are attributed to a polluted well of water.

*Puerperal Fever*.—Two cases occurred in Loughor parish. Dr. Evans writes, “The 2 cases in Loughor parish were attended by the same nurse. On enquiries being made, it was found that in each case reported, the midwife was in the habit of laying out the bodies of the dead.”

Cases of *whooping cough* were numerous in Loughor in September.

Dr. Evans gives it as his opinion that the adoption of the Infectious (Notification) Act, has been the means, on several occasions, of checking the spread of disease.

### GENERAL CONDITIONS.

The *water supply* of the Borough and Parish of Loughor are unsatisfactory.

The *disposal of refuse, &c.*, at Gowerton, is undertaken by the Authority.

The *cow-sheds and dairies* have been frequently visited, and any defective arrangements found in connection with them have in most cases been duly remedied.

### IMPROVEMENTS.

The *drainage* of Gowerton has been improved. *Plans and specifications* for the extension of water mains at Gowerton.

### REQUIREMENTS.

These are not specified.

Appended to the Report is a statement of the work done by the Sanitary Inspector.



**NEWPORT—Part of the District in Glamorganshire, viz., the Parishes of Llanfedw and Rhydywern.**

Medical Officer of Health—WALTER E. JAMES, M.R.C.S., L.R.C.P.

Area in acres, 3,225.

	1891.	1894.
Population .. ..	550 .. ..	550 (estimated).
Birth-rate, 27·7.	Death-rate, 16·3.	Zymotic-rate, 0·0.
	Phthisis death-rate, 0·0.	Respiratory death-rate, 1·8.
		Infant Mortality-rate, 129.

**INFECTIOUS DISEASES.**

These parishes (now included in the Llandaff and Dinas Powis District) were free from infectious disease.

**GENERAL CONDITIONS.**

*Rhydywern.*—"The slop drainage at River Row was found to be in a most unsatisfactory condition ; the drain in use here was an open pitched gutter running at the backs of the houses ; it was old, and without a proper fall, and in consequence slop water remained lying about in pools in different parts, instead of being conducted away at once. The closet accommodation here was insufficient, there being only one for six houses. This parish has now been taken over by Glamorganshire, but I understand that the defects mentioned above were being or about to be remedied."

**IMPROVEMENTS.**

None specified.

**REQUIREMENTS.**

The improvement of the *slop drainage and privy accommodation* at River Row, Rhydywern.

The Report is printed and contains tabular statement of work done by the Sanitary Inspector.

# PORT SANITARY DISTRICTS.

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*The Ports of Porthcawl, Port Talbot, Briton Ferry, and Neath, are under the supervision of the Medical Officer of Health for the Port and Borough of Swansea, respecting whom no reports were received.*

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## BARRY.

Medical Officer of Health—GEORGE NEALE, L.R.C.P.

The floating population of the district is roughly estimated at 800 persons.  
2,142 vessels entered the Docks during the year.

## INFECTIOUS DISEASES.

All possible precautionary measures against the importation of cholera and other infectious diseases were rigidly observed.

During the year, amongst the vessels from infected ports, one was found to be infected with cholera. Dr. Neale writes thus:—"On September 6th, it was reported to me that the Captain of the S.S. *Glangstryth* had died of cholera, at Antwerp, and that the vessel was leaving the port for Barry Dock, on that date. On September 7th, the steam tug *Pelaw* was engaged at the rate of £3 per diem, under the charge of the Medical Officer of Health and the Port Sanitary Inspector, to intercept the vessel. It was employed day and night from the 7th to 10th September, and on the 10th the infected vessel arrived in the roads. I ordered it to the mooring station and examined the whole of the crew and found all well. The ballast water, drinking water and bilges were all discharged. The ballast tanks and bilges were cleansed with corrosive sublimate. The drinking water tanks and casks were cleansed with Condy's fluid and a fresh supply was supplied from off the steam tug. The vessel was then thoroughly disinfected and all articles destroyed by being placed in the stokehole and burnt.

In compliance with the order of the Local Government Board, the names and destinations of all persons leaving the ship were taken, and forwarded to the Clerks of the several Authorities, to which districts they were proceeding. I again visited the vessel before evening tide, and saw the whole of the crew and found that all was well, and I then allowed the vessel to enter the port."

This ship was kept under observation during its stay in port, and proceeded to sea on the 17th with no further sickness.

## INSPECTIONS.

1,096 vessels were inspected, 996 were found in a fair or good condition, and 130 in a more or less defective and insanitary state. 69 written notices were served upon, and 61 verbal orders given to the masters, or those in charge, to have the defects and nuisances abated, and very little difficulty was experienced in having them complied with.

## CHOLERA HOSPITAL.

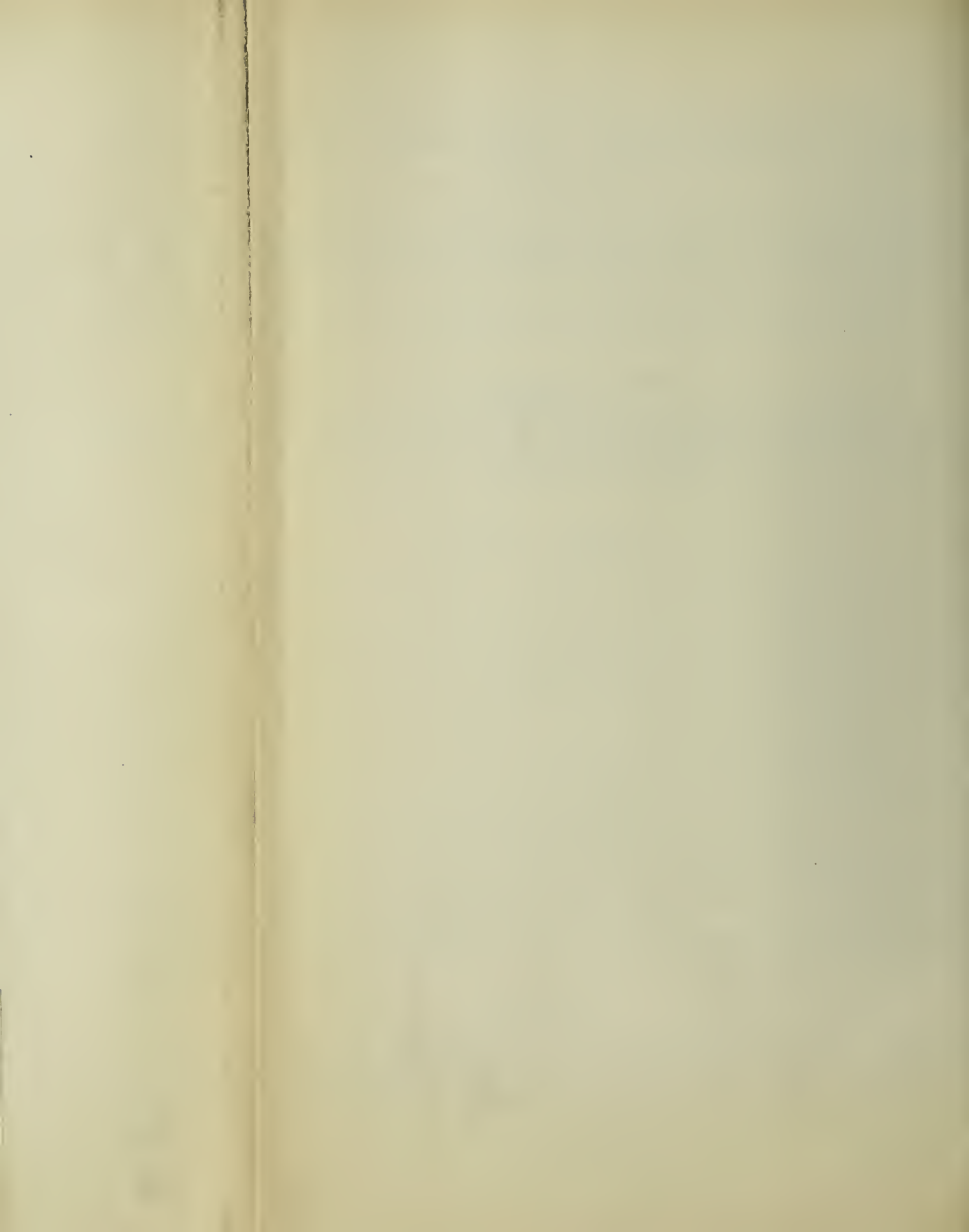
" In 1893, the Barry Port Sanitary Authority applied for a Provisional Order to obtain by compulsory power Sully Island as a site for a Cholera Hospital. An enquiry was held by the Local Government Board, and permission to proceed with the Provisional Order was refused.

In the autumn of 1894, the Authority determined to schedule a portion of the Flat Holm as a site for a Cholera Hospital. The necessary notices were served for obtaining a Provisional Order. A letter was sent to the Cardiff Port Sanitary Authority repeating the offer which had been made the previous year, and refused by the Port Sanitary Authority, viz :—Either to build a Hospital, or to send patients to Cardiff Hospital at a fixed sum per annum, and a fixed sum per case. This letter was considered and ultimately agreed to, just before the date of enquiry fixed by the Local Government Board."

Under the agreement all Barry patients will be for the future taken in at the Cholera Hospital at the Flat Holm.

## INFECTIOUS DISEASES HOSPITAL.

The Authority is provided with an Infectious Diseases Hospital, constructed of brick, stone, wood, &c., on shore, consisting of three wards capable of containing from six to nine patients, and used for the reception of cases of ordinary infectious disease brought into Port by shipping.





Area, Population, Births, Deaths.

\* Excluding 14 deaths which occurred in Workhouse, death-rate would be 13·4.

\* Estimated population 1893.

† In the year 1893 the area of this district was considerably increased.

‡ Including 289 deaths occasioned by the Albion Colliery disaster, death-rate would be 23·6.

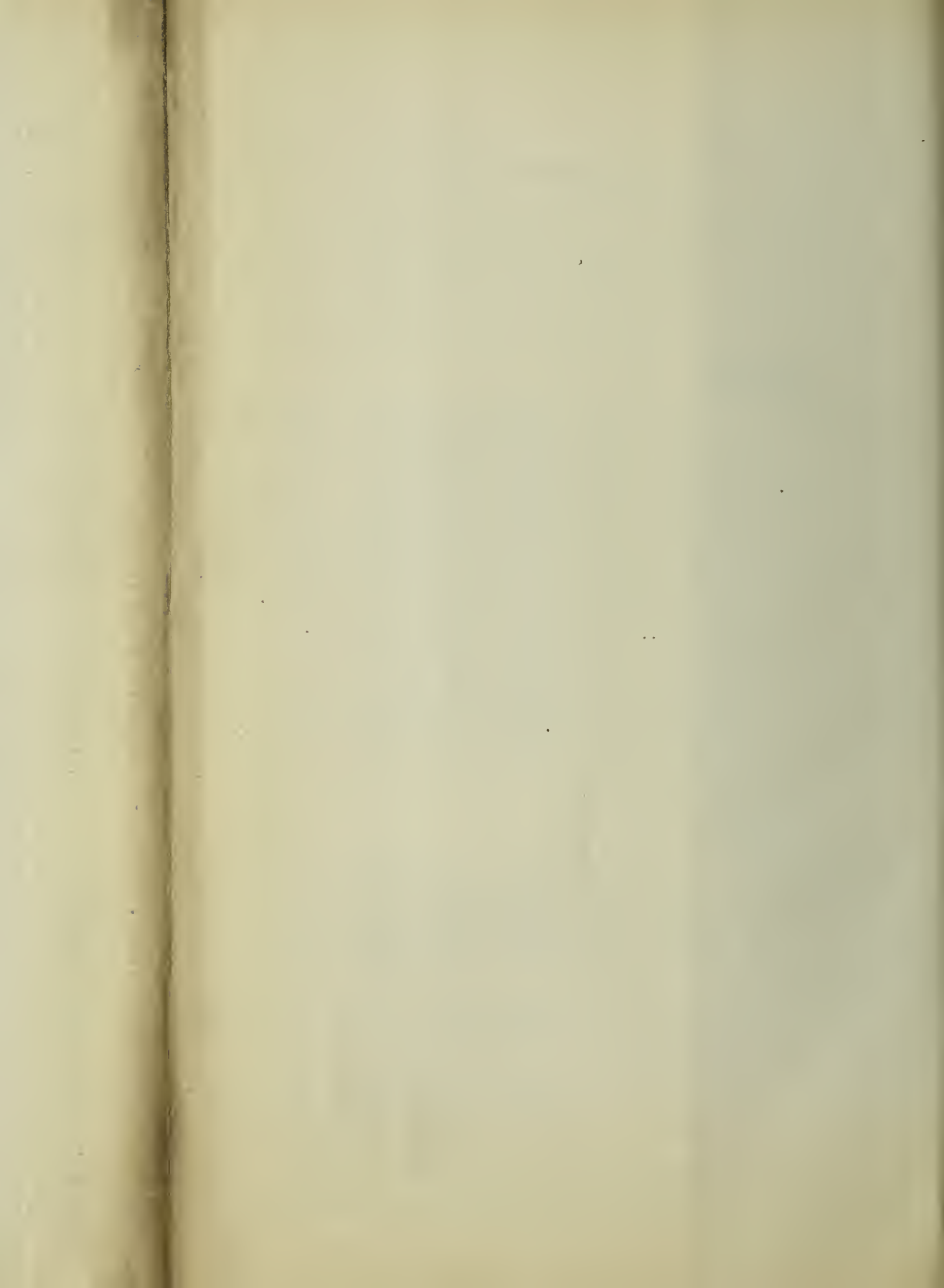




TABLE II.

Deaths at certain Ages and from specified Causes.

SANITARY DISTRICTS.	DEATHS AT SUBJOINED AGES.							Aged under 5 or above 5.	Small Pox.	Scarlet Fever.	Diphtheria.	Croup.	DEATHS FROM SUBJOINED CAUSES.														TOTAL.	REMARKS.				
	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	At all ages						FEVERS.				Typhus.	Enteric.	Con- tinued.	Puer- peral.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Phthisis.			Bronchitis, Pneumonia, Pleurisy.	Heart Disease.	Injuries.	All other Causes.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29				
URBAN.																																
Aberavon Borough	35	9	3	9	19	32	107	Under 5	...	...	...	1	...	...	...	...	...	...	4	...	...	11	...	1	27	44						
								5 upwards	...	2	...	...	...	...	...	...	...	1	...	...	10	6	10	2	32	63						
Cowbridge	3	2	1	2	9	10	27	Under 5	...	...	...	...	...	1	...	1	...	...	...	...	1	3	5	...	16	27						
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...						
Neath	55	21	10	7	47	42	185	Under 5	...	...	2	4	...	...	...	...	1	3	4	4	...	5	17	...	39	79						
								5 upwards	...	...	1	1	...	1	...	...	1	...	...	1	...	12	14	14	6	55	103					
Aberdare	252*	?	?	?	?	?	757	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	?	?	?	?						
								5 upwards	...	2	5	...	...	1	...	2	...	7	3	17	...	...	?	?	?	?						
Barry and Cadoston	78	37	13	4	62	16	210	Under 5	...	...	2	3	...	...	...	...	...	...	1	5	...	24	...	...	78	115						
								5 upwards	...	2	1	...	...	...	...	...	...	...	...	1	...	21	11	7	6	48	95					
Bridgend	18	15	4	6	26	28	87*	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	17	23						
								5 upwards	...	...	1	...	...	3	...	...	...	...	...	1	...	9	15	8	3	26	64					
Briton Ferry	43	3	2	4	28	23	103	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	2	9	...	1	32	44					
								5 upwards	...	...	...	...	...	2	...	...	1	...	...	...	...	4	13	7	4	28	59					
Caerphilly	50	20	9	7	48	29	163	Under 5	...	...	1	...	...	...	...	...	5	3	2	...	...	16	...	3	40	70						
								5 upwards	...	...	1	...	...	1	...	1	...	...	...	3	...	9	11	11	11	45	93					
Garw and Ogmore	104	35	9	20	56	12	236	Under 5	...	...	1	...	...	1	...	...	1	1	1	...	1	35	1	2	93	137						
								5 upwards	...	...	...	...	...	4	...	4	...	...	...	...	12	13	2	13	36	99						
Glyncorwg	25	8	4	2	18	6	63	Under 5	...	...	...	...	...	1	...	...	...	4	1	...	1	10	2	...	15	33						
								5 upwards	...	1	...	...	...	...	...	...	...	...	...	3	...	6	5	3	11	30						
Maesteg	53	*?	?	?	?	?	174	Under 5	...	1	...	1	...	...	...	...	...	1	...	...	3	6	1	...	43	53						
								5 upwards	...	2	...	...	...	...	...	...	...	...	...	1	13	15	15	4	26	76						
Margam	37	7	6	7	24	22	103	Under 5	...	1	...	1	...	...	...	...	...	1	...	...	1	12	...	...	28	44						
								5 upwards	...	...	1	1	...	...	...	...	...	...	...	...	11	9	12	3	22	59						
Merthyr	429	207	49	78	390	147	1,300	Under 5	...	...	11	11	...	2	19	...	8	6	21	54	...	165	1	?	1	?						
								5 upwards	...	...	...	...	...	...	...	...	...	3	...	...	131	95	...	?	38	?						
Mountain Ash	156	71	10	22	106	35	400	Under 5	...	...	...	6	...	...	...	...	...	...	11	7	...	90	...	6	106	223						
								5 upwards	...	...	2	4	...	5	...	4	3	...	...	5	1	20	33	15	20	65	177					
Oystermouth	10	8	1	3	17	19	58	Under 5	...	...	...	...	...	1	...	...	...	...	1	2	...	4	...	1	10	18						
								5 upwards	...	1	...	...	...	1	...	...	...	...	...	1	...	2	6	5	2	20	40					
Penarth	27	16	10	3	39	22	117	Under 5	...	...	4	4	...	1	...	1	1	...	3	1	...	11	20	5	4	62	117					
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...						
Pontypridd	200	87	24	27	149	67	*551	Under 5	...	4	2	7	...	6	...	3	1	13	28	7	1	45	109	24	12*	300	554*					
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	5	9					
Porthcawl	9	1	...	2	10	5	28	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4	...	11	19					
								5 upwards	...	9	6	20	...	4	...	...	1	12	30	23	2	8	270	6	12	608	1,011					
Ystradyfodwg	757	237	63	102	400	147	1,706	Under 5	...	3	3	...	...	24	...	10	...	1	...	5	3	82	117	87	66	292	695					
RURAL.																																
Bridgend and Cowbridge—																																
Bridgend Division	50	13	5	26	115	68	277	Under 5	...	...	...	2	...	...	...	...	...	...	2	...	...	19	...	1	38	62						
								5 upwards	...	...	1	...	...	6	...	...	...	...	...	...	1	36	22	6	125	215						
Cowbridge	17	4	5	2	27	23	78	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	13	21						
								5 upwards	...	...	1	...	...	1	...	...	...	...	3	1	5	4	9	12	21	57						
Cardiff	77	38	10	22	89	71	307	Under 5	...	...	3	5	...	3	...	...	2	14	1	...	2	23	...	1	61	115						
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	28	32	16	90	192						
Gower	19	7	7	9	28	32	102	Under 5	...	...	1	1	...	...	...	...	...	...	...	...	...	5	1	...	18	26						
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	16	10	9	2	39	76						
Merthyr	100	42	17	18	64	37	278	Under 5	...	2	1	...	...	...	...	...	...	24	...	...	...	...	?	?	?	?						
								5 upwards	...	1	...	...	...	1	...	1	...	...	1	...	13	61	...	?	?	?						
Neath	112	49	16	23	90	89	379	Under 5	...	1	...	7	...	...	...	...	10	3	2	...	2	35	...	1	101	162						
								5 upwards	...	2	...	...	...	3	...	3	1	1	...	2	28	43	37	11	85	217						
Pontardawe—East	57	22	9	11	38	24	161	Under 5	...	...	...	1	...	...	...	...	...	9	...	...	...	16	1	...	52	79						
								5 upwards	...	...	1	...	...	5	...	...	...	...	...	1	16	8	10	8	33	82						
„ West	53	14	8	17	43	33	153	Under 5	...	1	...	...	...	...	...	...	2	...	...	...	...	15	...	1	48	67						
								5 upwards	...	2	...	1	...	...	...	...	...	...	...	...	26	14	5	9	37	91						
Llantrisant and Llantwit Fardre	51	20	4	10	38	35	158	Under 5	...	2	2	1	...	...	...	...	1	2	2	...	...	15	1	2	43	71						
								5 upwards	...	...	1	...	...	3	...	...	...	...	...	...	6	10	15	5	47	87						
Swansea—Llangyfelach Division	98	47	5	10	47	22	189	Under 5	...	7	...	2	...	1	...	...	14	7	1	...	...	19	...	1	52	94						
								5 upwards	...	...	...	...	...	1	...	1	...	...	1	...	19	15	11	3	34	55						
„ Llandilo-Talyhont Division	81	42	8	15	69	37	252	Under 5	...	1	2	...	...	...	...	...	1	10	1	...	5	33	...	...	70	123						
								5 upwards	...	1	...	1	...	2	...	1	...	...	...	1	20	35	16	...	55	129						
Llanelly—Borough and Parish of Loughor	21	11	2	4	20	7	65	Under 5	...	...	...	1	...	...	...	...	...	2	1	...	4	12	...	1	12	32						
								5 upwards	...	...	...	...	...	...	...	...	1	...	...	...	9	5	3	3	11	33						
Newport—Parishes of Llanfedw and Rhydywern	1	2	...	...	...	2	5	Under 5	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...	3						
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2						





Notification, Isolation, Adoptive Acts.

SANITARY DISTRICTS.	Isolation Hospital (other than Workhouse) at the end of 1894.	ADOPTIVE ACTS.		Public Health Acts. Amendment Act.	Public Scavenging.	Aged under 5 or above 5.	CASES NOTIFIED OR OTHERWISE ASCERTAINED.											CASES REMOVED TO HOSPITAL.				REMARKS.
		INFECTIOUS DISEASES.					Small Pox.	Scarlet Fever.	Diphtheria.	Croup.	FEVERS.				Erysipelas.	Measles.	Whooping Cough.	Small Pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	
		Notification Act.	Prevention Act.								Typhus.	Enteric	Con- tinued.	Puer- peral.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
URBAN.																						
Aberavon ... ..	Yes	January, 1891	January, 1891	February, 1891	Yes	Under 5 ... 5 upwards ...	16	1	...	2	...	1	...	3	11	...	...	...	...	...	...	
Cowbridge ... ..	No	June, 1894	No	No	No	Under 5 ... 5 upwards ...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	
Neath ... ..	Yes	Yes	Yes	Yes	Yes	Under 5 ... 5 upwards ...	...	5	5	5	...	7	...	...	13	528	...	...	...	...	...	
Aberdare ... ..	Yes	No	No	No	Yes	Under 5 ... 5 upwards ...	...	...	No return	...	...	...	...	...	...	...	...	...	...	...	...	
Barry and Cadoxton ... ..	Yes	August, 1890	{ Parts 23 and 24 } { January, 1891 }	Part 5. 1893	Yes	Under 5 ... 5 upwards ...	...	44	2	3	...	3	...	...	6	...	...	...	...	...	...	
Bridgend ... ..	No	May, 1893	No	Part 3. 1891	Yes	Under 5 ... 5 upwards ...	...	...	...	...	...	14	1	3	31	...	...	5	...	...	...	
Briton Ferry ... ..	No	No	No	No	Yes	Under 5 ... 5 upwards ...	...	7	7	...	...	14	8	1	2	...	...	...	...	...	...	
Caerphilly ... ..	No	October, 1893	November, 1893	March, 1894	Yes	Under 5 ... 5 upwards ...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	
Garw and Ogmore ... ..	No	April, 1891	No	No	Part	Under 5 ... 5 upwards ...	...	29	...	...	...	2	...	...	...	...	...	...	...	...	...	
Glyncorrwg ... ..	No	No	No	No	Part	Under 5 ... 5 upwards ...	...	6	...	...	...	17	...	3	3	...	...	...	...	...	...	
Maesteg ... ..	Cottage	1894	No	No	Part	Under 5 ... 5 upwards ...	...	29	...	...	...	2	...	...	3	...	...	...	...	...	...	
Margam ... ..	No	1891	Yes	Yes	Yes	Under 5 ... 5 upwards ...	...	46	...	1	...	10	...	...	3	...	...	...	...	...	...	
Merthyr ... ..	One at Dowlais, one at Merthyr	January, 1891	March, 1891	March, 1891	Yes	Under 5 ... 5 upwards ...	...	13	...	1	...	...	...	...	...	...	...	...	...	...	...	
Mountain Ash ... ..	Yes	1889	No	1891	Yes	Under 5 ... 5 upwards ...	...	11	3	2	...	...	...	...	10	...	...	...	...	...	...	
Oystermouth... ..	Swansea Borough Hospital	November, 1892	1892	No	Part	Under 5 ... 5 upwards ...	...	80	3	6	...	59	...	...	1	...	...	...	...	...	3	
Penarth ... ..	No	May, 1890	No	No	Yes	Under 5 ... 5 upwards ...	...	12	1	2	...	8	...	4	21	...	...	...	...	...	9	
Pontypridd ... ..	No	1890	Yes	1890	Yes	Under 5 ... 5 upwards ...	...	18	...	...	...	1	...	...	...	...	...	...	...	...	...	
Porthcawl ... ..	No	August, 1893	August, 1893	August, 1893	Part	Under 5 ... 5 upwards ...	...	38	2	...	...	5	...	...	3	...	...	...	...	...	...	
Ystradyfodwg ... ..	Yes	January, 1890	January, 1894	January, 1894	Yes	Under 5 ... 5 upwards ...	...	11	13	4	...	6	...	1	8	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	63	3	3	...	32	...	5	17	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	1	...	...	...	...	...	1	3	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	198	5	4	...	29	2	...	...	...	...	...	...	2	73 } Cases of Diarrhoea notified.	
						Under 5 ... 5 upwards ...	2	243	7	5	...	126	4	17	22	...	...	2	...	18	285 }	
RURAL.																						
Bridgend and Cowbridge—																						
Bridgend Division ... ..	No	March, 1890	No	Part 3. October, 1894	Part	Under 5 ... 5 upwards ...	...	22	7	1	...	35	5	...	22	...	...	...	...	...	...	
Cowbridge „ ... ..	No	March, 1890	No	Part 3. 1893.	Part	Under 5 ... 5 upwards ...	...	3	...	...	...	4	1	...	39	...	...	...	...	...	...	
Cardiff ... ..	Cardiff Borough Hospital	December, 1889	1891	June, 1891	Part	Under 5 ... 5 upwards ...	...	12	6	2	...	3	...	...	1	...	138	...	...	...	...	
Gower... ..	No	No	No	No	No	Under 5 ... 5 upwards ...	...	32	23	1	...	15	...	...	5	...	65	2	...	...	...	
Merthyr ... ..	Cottage	November, 1890	No	No	Yes	Under 5 ... 5 upwards ...	...	1	2	1	...	2	...	...	...	...	...	...	...	...	...	
Neath ... ..	Yes	November, 1890	March, 1891	March, 1891	Part	Under 5 ... 5 upwards ...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pontardawe—East ... ..	No	No	No	No	Part	Under 5 ... 5 upwards ...	...	78	8	...	...	15	...	2	17	...	...	...	...	...	...	
„ West... ..	No	No	No	No	Part	Under 5 ... 5 upwards ...	...	4	43	1	2	...	38	1	2	20	985	...	...	...	...	
Pontardawe—East ... ..	No	No	No	No	Part	Under 5 ... 5 upwards ...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	
„ West... ..	No	No	No	No	Part	Under 5 ... 5 upwards ...	...	...	...	...	...	22	...	...	...	...	...	...	...	...	...	
Llantrisant and Llantwit Fardre... ..	No	September, 1893	No	No	No	Under 5 ... 5 upwards ...	...	5	...	...	...	2	...	...	...	...	...	...	...	...	...	
Swansea—Llangyfelach Division... ..	Swansea Borough Hospital	1889	1895	No	Part	Under 5 ... 5 upwards ...	...	2	1	...	...	9	...	1	...	...	...	...	...	...	...	
„ Llandilo-Talybont Division ... ..	Swansea Borough Hospital	1889	1895	No	Part	Under 5 ... 5 upwards ...	...	117	1	...	...	...	...	...	...	...	...	...	...	...	...	
Llanelli—Borough and Parish of Loughor ... ..	Yes	Yes	...	...	Part	Under 5 ... 5 upwards ...	...	109	...	...	...	30	...	3	6	...	...	...	...	...	3	
Newport—Parishes of Llanfedw and Rhydywern ... ..	...	Yes	...	...	...	Under 5 ... 5 upwards ...	...	21	2	...	...	14	...	2	2	...	...	2	...	...	3	
						Under 5 ... 5 upwards ...	...	58	...	1	...	...	...	...	...	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	80	...	1	...	5	...	2	1	...	...	...	...	...	...	
						Under 5 ... 5 upwards ...	...	None	...	...	...	...	...	...	...	...	...	...	...	...	...	





